

**SHAME, DISSOCIATION AND COGNITION: AN EXPERIMENTAL INVESTIGATION.**

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**OF MASTER OF ARTS IN PSYCHOLOGY**

**BY AMBER NGAIRE SCOTT**

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## **ABSTRACT**

Shame is considered an influential human emotion that can have critical effects on aspects of human functioning, including guiding behaviour and shaping a person's sense of identity. In order to better identify shame, it is vital to distinguish shame behaviours from those of other self-conscious emotions. The current study examined shame and the degree to which eye gaze diversion is associated with shame generally, or rather more isolated to either internal or external shame. Additionally, it explored whether experiences of dissociation would increase after the shame induction. Lastly, intrusive thoughts following shame induction were examined. Individuals in counselling for psychological problems ( $N = 33$ ) completed four measures assessing trait and state shame and dissociation, and listened to shame-inducing and neutral narratives while either viewing themselves in a mirror (internal shame), looking at the experimenter (external shame) or looking at a neutral screen (neutral). Eye gaze diversion was recorded during the experimental task. Higher gaze diversion and dissociation were found when verbalising the shame narrative compared with the neutral narrative in all conditions. Additionally, intrusion frequency and distress were elevated the day after exposure to the stimuli, but decreased on day two. The current study has important implications for the identification of shame, and demonstrates that dissociation increases during shame activation. This understanding can provide direction for future research which may aid in the identification of further shame behaviours and could lead to better therapeutic outcomes when considered.

# CHAPTER 1

## INTRODUCTION

### *1.1 Overview*

Shame has been described as “perhaps the most negative and disturbing emotional experience” (Keltner & Harker, 1998, p. 78). It commonly results from a situation in which an individual violates rules of a moral nature. Shame can guide our behaviours, influence our feelings about ourselves and shape a sense of self-identity (Matos & Pinto-Gouveia, 2010). It is thought that for some individuals shame can be an experience so intense that they may risk serious injury, even death, to avoid the experience (Gilbert, 1989). Clinical and empirical data suggests that early shame experiences might operate like traumatic autobiographical memories, increasing vulnerability to psychopathology (Claesson & Sohlberg, 2002; Gilbert, 2002), such as; posttraumatic stress disorder, borderline personality (Matos & Pinto-Gouveia, 2010), depression (Andrews, 1995) and dissociation (Dorahy, 2010). In fact, the nature of shame experiences is argued to share powerful characteristics with a traumatic memory, where the self feels fragmented and dissociated, and the feeling intrudes like a flashback (Matos & Pinto-Gouveia, 2010). Additionally, shame can impede active coping and can be difficult to modulate (Lewis, 1992; Tangney, Burggraf, & Wagner, 1995). Dissociation may reflect a way of limiting shame through psychological means, therefore being regarded as a coping mechanism (Zeidner & Endler, 1996). As dissociation is poorly conceptualized, it may remain unrecognized and undetected in individuals, which can interfere with the treatment of specific mental health disorders if present. Therefore, dissociation may have a devastating impact on individual’s treatments, even more so if it is associated with shame, which can often be ignored in therapy (Hahn, 2009).

The domain of shame, and in particular its relationship to dissociation, requires further exploration. The current study contributes to this exploration with simultaneous



investigation of different aspects of shame experiences. The aim of this thesis and the subsequent review is to elaborate on the fundamental features of both shame and dissociation, while integrating recent literature investigating their association. Specifically, this thesis looks at shame with regard to the non-verbal marker of eye gaze diversion, as well as examining whether or not symptoms of dissociation and physiological arousal occur during an induction of shame. Finally, shame will be examined as a traumatic experience by ascertaining whether shame inductions result in later intrusive memories in participants. The literature review will consider self-conscious emotions, explore the conceptualisation and motivation of shame, provide a comparison between internal- and external-based shame, and non-verbal behaviours associated with shame, specifically eye-gaze diversion. Furthermore, the conceptualisation of dissociation, and dissociative experiences will be explored (e.g., depersonalisation and derealisation, amnesia and absorption), with literature regarding shame as a traumatic memory and its association with dissociation presented. Finally the current study is described.

## ***1.2 Self-Conscious Emotions***

All emotions arise from events that in one way or another have *relevance* for oneself (Tangney & Tracy, 2011). Emotion can be broken into either basic or self-conscious, where basic consists of emotions such as sadness, fear and joy, which are present more or less from birth, while self-conscious includes emotions such as shame, embarrassment, pride or guilt, which develop early in life (Tracy & Robins, 2004a). Unlike basic emotions, which require little sense of self, the self-conscious emotions require a degree of self-awareness and involve comparison of one's behaviour to standards and rules, thereby playing central roles in the socialization and adherence to moral and societal norms (Goffman, 1967; Lewis, 1993). Understanding self-conscious emotions is crucial in order to understand the self. Self-conscious emotions are associated with complex cognitive skills, and therefore take more

time to develop than basic emotions such as sadness or fear (Weiner, 1986). Self-conscious emotions play a critical role in the motivation and regulation of feelings, thoughts and behaviours (Campos, 1995). These emotions, evoked by self-reflection and self-evaluation can be implicit or explicit in nature, and experienced consciously or outside awareness. Yet in some way these emotions essentially involve reactions to one's own characteristics or behaviours (Tangney & Tracy, 2011). When good things happen, for example, it is possible one may feel a range of positive basic feelings, like joy and surprise. However, it is pride that is felt in our own positive characteristics or actions. As previous literature implies, self-conscious emotions involve self-relevant thoughts, intentions, and feelings as well as behaviours (Fischer & Tangney, 1995; Campos, 1995). Hence, self-conscious emotions are important to a variety of social outcomes. Self-conscious emotions function together to provide immediate and relevant feedback on our moral and social acceptability (Tangney & Tracy, 2011), ultimately our worth as human beings.

### ***1.3 Shame***

#### ***1.3.1 Conceptualising Shame***

Shame is an emotional response that has been described as an aversive experience, in which an individual is motivated to avoid the reoccurrence similar experience (Gilbert & McGuire, 1998). This is because shame generally occurs as a result of incompetence or moral indiscretions in which the individual is left feeling demeaned, discredited, or disgraced. Essentially, shame is a strong and influential human emotion that has a critical effect on numerous aspects of an individual's psychological functioning, including aspects such as cognition, behaviour, emotion, sense of self and physiology, as well as operating at the individual, interpersonal, group and cultural levels throughout one's life (Gilbert, 1998; Kaufman, 1989; Lewis, 1992). In order to define shame it is vital to distinguish shame from

other emotions which are often used interchangeably, such as embarrassment and guilt. Throughout the literature there are several instances in which embarrassment has been used interchangeably with shame, due to the belief they are one and the same. Kaufman (1989), for example, theorised embarrassment to be an element of shame, stating “however mild or intense, embarrassment is not a different affect” (p. 24). With regard to their difference, shame, occurs when an “objectionable behaviour is seen as reflecting, more generally, a defective, objectionable self” (Tangney, Miller, Flicker & Barlow, 1996, p. 1257). Conversely, embarrassment has been defined as “an aversive state of mortification, abashment and chagrin that follows public social predicaments” (Miller, 1995, p. 322). Shame is often assumed to be a more intense emotion than that of embarrassment (Tangney, Miller, Flicker & Barlow, 1996). Buss (1980) has suggested, along with others (such as Lewis, 1992; Ortony, Clore, & Collins, 1988) that shame follows more serious failures and moral transgressions, whereas embarrassment results from comparatively trivial social transgressions. Thus suggesting the resulting emotion relies on situational factors. Buss (1980) cites additional differences between the two emotions, including embarrassment being more likely to be accompanied with blushing, smiling and feelings of foolishness, and less likely to involve feelings of depression. Buss (1980) also implies the root of these differences lies within the nature of the shame versus embarrassment-eliciting event, where “shame has moral implications, but embarrassment does not” (p. 161). Another differentiation that has been made relates to shame being tied to deficiencies in one’s core self, while embarrassment results from deficiencies within one’s presented self (Klass, 1990). As a result, shame has been associated with more global and enduring negative attributions about the self, whereas embarrassment is tied to more transient, situation-specific failures. Subsequently, shame is considered a grimmer, more intense emotion, resulting from moral transgressions, with ties to deficiencies in one’s core self. Whereas embarrassment, typically resulting from

transgressions of a trivial nature and deficiencies of one's presented self, is accompanied by feelings of awkwardness and foolishness (Buss, 1980). This indicates that shame is more aversive due to negative events being directly connected to one's self identity, while embarrassment sits at a more superficial level and is suggested to be more transient. When an event occurs that impacts upon one's core self it is likely that stronger subsequent emotions may be felt, which may indicate why the link between shame and further psychopathology has been found repeatedly. However, Crozier (2014) states that no consensus has been established on how shame and embarrassment differ, stating minimal consistency within literature.

Guilt, like embarrassment, is another emotion often confused with shame. Once again, the defining concept is different to that of shame, with guilt being a negative self-evaluation of particular *behaviours* rather than a negative evaluation of the core self (Lewis, 1971). Some have argued that shame is a public emotion that results from public exposure and disapproval of an impropriety or shortcoming (Tangney, Miller, Flicker & Barlow, 1996). Shame is also proposed to result from a private feeling linked to judgements of our own feelings and characteristics (Matos & Pinto-Gouveia, 2010), which gives a contrasting view than stated above. However, guilt is a more private emotion that follows on from an individual's internalised conscience to a breach of personal standards, and as a result may be felt when one is alone. These ideas have been challenged in recent years (Tangney, Marshall, Rosenberg, Barlow & Wagner, 1994). In more recent studies when distinguishing between shame and guilt, most researchers in the field draw heavily on Lewis' (1971) influential reconceptualization. Wherein he stated that "the experience of shame is directly about the *self*, which is the focus of evaluation. In guilt, the self is not the central object of negative evaluation, but rather the *thing* done or undone is the focus. In guilt, the self is negatively evaluated in connection with something but is not itself the focus of the experience" (Lewis,

1971, p. 30). Specifically, it is not the nature of the transgression which matters, rather the subjective interpretation of the event taken by the individual; placing an emphasis on a bad self in regards to shame (“*I did that horrible thing*”) or a bad behavior pertaining to guilt (“*I did that horrible thing*”). Guilt may therefore be a less intense emotion than shame as the individual has a negative evaluation of what they did rather than a negative evaluation of who they are.

### *1.3.2 Motivations of Shame*

It has been proposed that shame first arises from interactions with significant others early on in life, however it develops later than primary emotions, such as anger, fear and joy. This is proposed due to shame being dependent on the initial development of certain mental abilities that include a degree of self-awareness, a fundamental theory of mind, and an ability to imagine one’s self as thought about by others (Gilbert, 2002; Gilbert, 2003). It is when these self-conscious competencies for a sense of self as a social agent develop and combine with primary emotions that the self-conscious emotions are thought to arise. It is due to these self-conscious competencies merging with primary emotions that shame is experienced. For example, when someone experiences shame they may feel anxious, whereas another may feel anger. Shame can impede active coping and can be difficult to modulate (Lewis, 1992; Tangney, Burggraf, & Wagner, 1995). Evidence now suggests that shame can act as an inner warning signal for challenges and threats to the self, in turn triggering one’s automatic defences, specifically the desire to escape or behavioural submission (Keltner & Harker, 1998). The shame response also acts through reducing facial communication with others (Tomkins, 1963). Nathanson (1992) proposes shame is a vital regulator of social behaviour in humans. As a way to illustrate the various ways humans react when experiencing shame Nathanson (1992) developed ‘the compass of shame’. The four poles of the compass of shame comprise withdrawal (isolating oneself, running and hiding), attacking self (self-put-

down and masochism), avoidance (denial, abusing drugs and distraction through thrill seeking) and attacking others (turning the tables, lashing out verbally or physically and blaming others). Nevertheless we all react to shame in differing degrees, in ways described by the compass.

There are theorists (e.g. Darwin, 1872; Ekman, 1984; Izard, 1971) who believe emotion displays, including shame, in the course of human evolution have been refined to serve informative, influential and evocative functions that coordinate adaptive social behaviours (Keltner & Harker, 1998). These displays of emotion provide quick, dependable and easily recognised signals of current emotion (Ekman, 1984). It is the informative, influential and evocative functions of shame displays that play a critical role in the appeasement process (Keltner & Harker, 1998). Wherein, it has been proposed that shame and related states, such as embarrassment and guilt, serve the important function of appeasing observers of social transgressions, which allows social harmony to be re-established following the rule violations that may cause the disruption in social interaction (Keltner, 1995; Keltner & Buswell, 1996; Miller & Leary, 1992). Appeasement displays are used to signal lower status and submissiveness, which deters observers from punitive judgment and action (Castelfranchi & Poggi, 1990). MacLean (1990) boldly went as far as stating that appeasing submissive displays are “the most important of all displays, because without [them] numerous individuals might not survive” (p. 235). This aligns with the idea that appeasement is an essential function for survival of interpersonal relationships, and the maintenance of one’s place in a social group (e.g., avoiding social rejection). What is central to shame, is that the affected individual sees themselves to be in an unwanted inferior psychological state, is concerned of the opinions of others (e.g., being looked down upon), and tends towards adopting non-assertive and submissive defensive behaviours (Gilbert, Pehl, & Allan, 1994; Allan & Gilbert, 1997; Gilbert & McGuire, 1998). Submissive displays have

been found to involve behaviours such as eye gaze avoidance, backing down when challenged, not advertising oneself, inhibition of confidence in oneself, and wanting to hide or escape when challenged (Gilbert, 1998; Lorenz, 1966). If shame does in fact evoke submissive behavioural strategies, there should be evidence that the individual who experiences shame will try to escape from the situation, or alternatively adopt submissive behaviours to limit possible social threats. This in turn restores social relations by evoking social approach in observers (Keltner & Harker, 1998).

### *1.3.3 Internal vs. External Shame*

Despite shame often being considered a self-focused experience, regarding feeling inferior in some way, it primarily relates to how one thinks they exist in the minds of others (Keltner & Harker, 1998; Gilbert & McGuire, 1998). Similarly, it has been argued by Gilbert (1998) that shame can be either an internally-generated inner experience of one's self; involving an involuntary affective-defensive response to the perceived threat of social rejection, or alternatively, an actual experience of social rejection by an individual or group. Therefore, shame may result from a private appraisal, through negative evaluations of one's attributes or behaviours (Kaufman, 1989); ultimately judging one's self as inferior, inadequate, or weak. Alternatively, shame may occur from a social event (e.g., being judged and shamed in the eyes of others), suggesting whether one is shamed by others or themselves, they can feel defeated, alienated and lacking in dignity or worth (Tomkins, 1963). Internal shame is associated with self-evaluations and self-directed effects of a negative nature (e.g., feelings of self-disgust; Gilbert, 2000). External shame however, occurs when feelings of shame are activated by the social environment, with evaluations focusing on aspects one believes others would reject if they were to become public. Cognitively, external shame regards how the person thinks others see them, whereas internal shame relates to feelings of self-devaluation (Gilbert, 1998). This distinction between internal and external shame is

important, and not always made by researchers in the area of shame. However, there is usually a connection between internal and external shame and when written people can often see this link (Gilbert et al., 2010).

In a study by Goss, Gilbert and Allan (1994), it was found that in respect to general negative attributes (such as feelings of inadequacy, not being good enough, or being defective in the eyes of oneself), there was a high correlation between internal and external shame cognitions. This is not always the case however, for example, there exists evidence that socially stigmatised traits, being obese for example, does not inevitably lead to a sense of internal personal shame (Crocker & Major, 1989). That is, when one has feelings of inadequacy of one's self, they expect others to see them in the same way. However, one does not always see themselves the same way that others do, leading to some discrepancies in the relationship between internal and external shame. It is not always one's own behaviours or attributes that cause feelings of shame. It is possible to experience shame due to the behaviour of another, wherein a close connection is usually present (e.g., a friend or family member). An example of this could be a person who feels ashamed because a sibling has a severe and enduring mental health problem (Wasserman, de Mamani & Suro, 2012). In this case shame is experienced because that person (e.g., sibling) is a feature of the individual's self-definition (Tangney & Tracy, 2011). Regardless of whether shame results from an internal or external cue, it has been suggested that clinicians would benefit from knowledge of behavioural indicators of shame to aid identification in on-going therapeutic interactions, so that it can be targeted and remediated (Keltner & Harker, 1998).

#### *1.3.4 Non-Verbal Markers of Shame*

There exists a belief that human emotions during face-to-face interactions are revealed through easily identifiable displays, displays that are non-verbal in nature (Izard, 1977). This is consistent with the consensus within the literature that shame, as with most



self-conscious emotions, is associated with cross-culturally recognisable non-verbal signals (Tracy & Robins, 2004b; Tracy & Robins, 2007; Tracy, Robins, & Schriber, 2009). While other emotions have been identified with similar non-verbal markers, studies have found shame to have its own distinct markers (Keltner, 1995), which differentiate it from other closely-related self-conscious emotions, like embarrassment and guilt. This follows on from Darwin's (1872) initial idea that expressions of shame are characterised by blushing, confusion of mind, downward cast eyes, slack posture, and lowered head. Avoiding eye contact and holding the head down are also well-known behavioural markers of shame (Lewis, 1992). Non-verbal signals, such as head tilted downward and lowered eye gaze, have been demonstrated in studies to evoke above-chance recognition of shame (Martens, Tracy, & Shariff, 2012). While these non-verbal behavioural markers cause people to recognise shame, today's concept of shame follows on from Darwin's (1872) principle of antithesis; where he described certain expressions appearing the way they do because they emerged in opposition to other expressions (Martens et al., 2012). Darwin and others (1872; Heckhausen, 1984; Stipek, Recchia, & Mc-Clintic, 1992) have considered shame expressions to be characterised by one's head being bent down, eyes wavering, with the possible inclusion of slumped posture, suggesting shame to be antithetical to pride. Studies in recent years support these observations of shame (e.g. Izard, 1971; Keltner, 1995; Tracy & Robins, 2004b, 2007). While 'basic' emotions can be recognised through distinctive configurations of facial muscle movements, the recognition of 'self-conscious' emotions, like shame, require a particular and more complex combination of body movements. Studies of non-verbal behaviours have also found that shame is associated with non-verbal facial displays that are characteristic of submissiveness, such as eye gaze avoidance (Keltner, 1995; Keltner & Harker, 1998).

Keltner (1995) hypothesized embarrassment and shame would have distinct displays if they signal apologies for different types of transgressions. This is derived from research

showing shame to follow failures to measure up to personal ideals (Babcock, 1988), while embarrassment follows violations of social comportment rules (Edelmann, 1987). In Keltner's (1995) study, one hundred and eighty three students observed 24 different non-verbal displays of six emotions (i.e., anger, disgust, enjoyment, amusement, embarrassment and shame). They were then required to indicate which of the six emotions best matched each emotional display, as well as the intensity of the display observed. The selected markers of shame included both head and gaze movements downwards. Whereas the markers for embarrassment consisted of gaze down (without head movement downwards), a controlled smile, head movements away, and face touching. Results attributed shame as the most intense emotion that was displayed. Consistent with the hypothesis, observers distinguished accurately between the displays of shame and embarrassment, with infrequent confusion of the two emotions, further demonstrating shame having its own distinct markers.

#### *1.3.5 Eye Gaze Diversion*

Gaze avoidance has been defined as "intentional avoidance of eye contact" (pp. 78, Kleinke, 1986). When eye contact is made during a face-to-face interaction, a person may wonder how they appear in the eyes of the other, or perhaps more generally query the meaning of the interaction (Kleinke, 1986). Looking into the eyes of another has been proposed to elicit a number of social cognitive and affective processes, including a heightened sense of self-awareness, which is key to self-conscious emotions. In situations where one deems another's gaze to be negative or undesirable, their heightened self-consciousness may increase gaze diversion, as a way to reduce negative feelings of exposure and ultimately reduce the experience of shame. Based upon current literature, it is recommended that future studies use a wider range of targets, where judges will find additional improvements in shame recognition when non-verbal displays such as eye gaze diversion are added (Tracy et al., 2009).

Based on the aforementioned non-verbal markers of shame, the current study aimed to investigate eye gaze diversion to determine if this non-verbal signal is related to shame in a general sense or is more prevalent when experiencing either internal or external shame. For example, if participants divert their gaze more while reading a scenario whilst looking at another person than looking at themselves, they are likely responding more to external shame than internal shame. Gilbert and McGuire (1998) assert eye gaze avoidance as one of the most primitive and prominent defensive signals, and is also the most common defensive behaviour of shame. In short, shame as a defensive behaviour appears to reflect a signal for submission, with Argyle (1967) asserting that if one lowers their eyes to another, this is a sign of submission to the other person's wishes.

## ***1.4 Dissociation***

### *1.4.1 Conceptualising Dissociation*

Whilst gaze diversion may indeed reflect a behavioural means of reducing shame, psychological means may also be employed to moderate or limit the negative self-evaluations of shame; one such strategy may be dissociation (Dorahy, 2010; Kessler & Bieschke, 1999; Talbot, Talbot & Tu, 2004; Feiring, Taska & Lewis, 1996). The concept and facets of dissociation have been, and continue to be difficult to conceptualise. Dissociation has been broadly defined as a “disruption of the usually integrated functions of consciousness, memory, identity, or perception of the environment” (p. 447, American Psychiatric Association, 1994). This definition is somewhat vague and has resulted in considerable confusion regarding the concept of dissociation (Cardena, 1994; Marshall, Spitzer & Liebowitz, 1999), but also exemplifies the challenges developing a unified understanding that is seen throughout the literature.

As it stands, there remains controversy surrounding the conceptual definition of dissociation, which is largely reflected in two competing views. The first view consists of dissociation denoting a vast range of experiences from detachment from one's immediate surroundings through to the existence and alteration in identities (as seen in dissociative identity disorder). These experiences are thought to be nonpathological ("normal") and pathological in nature respectively (e.g., Dalenberg & Paulson, 2009; Bernstein & Putnam, 1986; Butler, 2004, 2006; Gold, 2004). Essentially, this concept encompasses the idea that common everyday occurrences, such as daydreaming, are nonpathological dissociation, while alterations in identities are a pathological form of dissociation. Theorists who take this stance conclude that evidence suggests "normal" dissociation is in fact still dissociation (Dalenberg & Paulson, 2009). The second view proposes that "normal" dissociation has been incorrectly added to the concept of dissociation, and rather represents alterations in consciousness, a different conceptual and phenomenological experience (e.g. Steele, Dorahy, Van der Hart, & Nijenhuis, 2009; Van der Hart, Nijenhuis, Steele & Brown, 2004). In this theory, structural dissociation at the level of personality is distinguished from changes in conscious awareness (e.g., alterations in consciousness); structural dissociation (pathological dissociation) involves a division of the personality and leads to dissociative symptoms, like ego-observing depersonalisation, amnesia and flashbacks. These symptoms are thought to be the by-products of the existence and interplay between dissociative divisions of the personality (Van der Hart, Nijenhuis & Steele, 2006). Alterations in consciousness are not manifest from a latent dissociative structure, but rather reflect changes in the level (e.g., tired, alert) and field (narrow, broad) of consciousness. Phenomena emblematic of alterations in consciousness include absorption, perceptual distortions (e.g., derealisation) and lapses of awareness, while being associated with manifestations of dissociation they are distinct (Steele, Dorahy, Van

der Hart, Nijenhuis, 2009). The phenomena are easily confused however, as they tend to occur simultaneously.

#### *1.4.2 Motivations for Dissociation*

In instigating the systematic study of dissociation, the French philosopher/physician Pierre Janet (1901/1977), claimed dissociation occurred only in those who had a weakness of mental functioning, which in turn led to hysteria when one was excessively stressed. Janet also considered trauma to be merely one of a number of stressors that had the potential to worsen an already impaired mental efficiency of a hysteric person, generating a process (i.e., dissociation) leading to the occurrence of hysterical symptoms in that person. Ultimately, Janet insisted dissociation was purely a mental or cognitive deficit, rather than a defence mechanism (Janet, 1901/1977).

However, more recently cases of dissociation have been regarded as a coping mechanism, or alternatively a defence mechanism to minimise the occurrence of the stress or conflict that is being experienced (Weiten & Lloyd, 2008; Snyder, 1999; Zeidner & Endler, 1996). From this perspective a person may dissociate as a response to stress, including when they experience significant shame. As Simeon, Yehuda, Knutelska, and Schmeidler (2008) state, there has been a lack of attention given to dissociation over the years, which is “puzzling given limited but persuasive evidence that persistent dissociation after mass traumas has important consequences” (p. 325). Literature over the past decade has submitted that transitory dissociative experiences are reported in a large majority of individuals both in clinical and nonclinical populations, encompassing various cultures (Bernstein & Putnam, 1986).

### *1.4.3 Symptoms of Pathological Dissociation*

As the present study intends to examine various forms of dissociation, these are described below. Literature suggests that depersonalisation/derealisation, amnesia and absorption are core features of dissociation (Ross, 1996; Kihlstrom, Glisky, & Angiulo, 1994; Ray, June, Turaj, & Lundy, 1992), but as noted above there is some debate about whether all of these reflect dissociation (e.g., absorption, derealisation; Steele et al., 2009). Dissociative experiences and symptoms occur with differing degrees of intensity and frequency in both clinical and general populations (Ross, Joshi, & Currie, 1990). Dissociative experiences can be distressing to individuals to the point where they feel out of control and alienated (Allen, Console, & Lewis, 1999), and have the potential to disrupt areas of psychological functioning (American Psychiatric Association, 2013). As often assumed to typify the dissociation construct (e.g., they are often identified in factors analyses of the DES), depersonalisation/derealisation, amnesia and absorption will now be examined further.

#### *1.4.3.1 Depersonalisation and Derealisation*

Depersonalisation refers to a subjective sense of detachment or disconnection from oneself. This may reflect detachment from one's mental processes or body (American Psychiatric Association, 2013). Depersonalisation experiences include, yet are not limited to; watching oneself from a distance (like viewing a movie), an out of body experience, feeling disconnected from one's own thoughts, feeling numbed/detached from one's emotions, looking in the mirror and feeling detached from one's image (Simeon, 2009; American Psychiatric Association, 2000; Coons, 1996; Lambert, Senior, Fewtrell, & Steinberg, 2001). Often, depersonalisation is associated with derealisation, in which an individual perceives the external world as strange, or unreal; almost dreamlike in nature (Sierra & Berrios, 2000). Whereas experiences of derealisation are often characterised by visual distortions, such as blurriness, widened or narrowed visual field, flatness, or altered distance or size of objects.

Auditory distortions can also occur, where noises are muted or heightened (American Psychiatric Association, 2013). While both experiences are known to co-occur, they remain distinct phenomena (Baker et al., 2003).

#### *1.4.3.2 Amnesia*

The defining characteristic for dissociative amnesia, formerly referred to as psychogenic amnesia, is the inability to recall important autobiographical information, where this inability to recollect cannot be attributed to normal circumstances such as forgetfulness (American Psychiatric Association, 2013). Dissociative amnesia results from a psychological defence in relation to a potential cause, for example a stressful or traumatic event; rather than direct damage to the brain, such as head injury, physical trauma, or disease, which is referred to as organic amnesia (Kopelman, Christensen, Puffett & Stanhope, 1994). Dissociative amnesia has been found to include three different types of amnesia: localised, selective, or generalised (American Psychiatric Association, 2013). Localised is where an individual cannot recollect events that took place within a limited period of time, for example, some survivors of the 2011 Christchurch earthquakes may not remember how they got out of damaged buildings. Selective is where an individual can recall some, yet not all of the events that occurred in a limited time period, for example, a rape victim may recall parts of the event, rather than the event in its entirety. Lastly, generalised amnesia is where an individual cannot remember chunks or aspects of their own life, such as between the ages of 5 and 8 years.

#### *1.4.3.3 Absorption*

Absorption may be described as a period where one's whole attention is fully engaged in his or her mental imagery (Roche & McConkey, 1990). Absorption experiences can include fantasising, daydreaming, or becoming so engaged in a task, that one becomes

unaware of other external events, and is unaware of the passage of time passed. Absorbed attention is centered and amplifies to a great extent the experience of one aspect of reality, whilst other aspects recede from an individual's awareness (Tellegen & Atkinson, 1974). Therefore, the absorbed individual appears not to notice external events that would usually draw their attention. The vivid subjective reality one experiences during absorbed attention may, during a more normal state of awareness, appear as altered, or imaginary. Experiences of absorption have been described as common, being mild and nonpathological in nature within the general population (Roche & McConkey, 1990). Yet, absorption can be experienced at pathological levels (Somer, 2002). As noted above, some theories of dissociation exclude the construct of absorption. The current research took an atheoretical approach to this issue and examined whether absorption was associated to shame experiences.

### ***1.5 Shame, Trauma, and Dissociation***

Shame is believed to reflect an indictment of one's core self. Of which, this condemnation of the self has consequences for psychological functioning (e.g., cognition, emotion and behaviour) that are insidious and persistent (Lewis, 1992; Gilbert, 2002; Gilbert & Irons, 2005; Gilbert & Procter, 2006). It has been suggested that the nature of shame experiences have powerful characteristics similar to traumatic memories, evoking intrusions, avoidance, fragmented states of mind and dissociation. However, this has not been empirically investigated (Matos & Pinto-Gouveia, 2010). Authors have proposed shame experiences may be recorded in autobiographical memory as conditioned emotional responses, impacting the formations of self-relevant beliefs, in emotional and attentional processing (Gilbert, 2002; Kaufman, 1989; Lewis, 1992). Clinical and empirical data supports this notion, suggesting that early shame experiences might indeed operate like traumatic memories in autobiographical memory, potentially increasing the vulnerability to psychopathology



(Claesson & Sohlberg, 2002; Gilbert, 2002). Shame has frequently been associated with a number of psychological disorders including posttraumatic stress disorder, borderline personality disorder, and eating disorders; it is important to note that these disorders often include an aspect of dissociation (Matos & Pinto-Gouveia, 2010). Matos & Pinto-Gouveia (2010) investigated the nature of shame as a traumatic memory, with specific regards to traumatic characteristics of early shame experiences. It was established that early shame experiences do reveal traumatic memory characteristics, and that those shame experiences associated with participants' current feelings of both internal and external shame in adulthood. Furthermore, Platt and Freyd (2015) examined the association between betrayal trauma, shame, dissociation, and fear responses to perceived threat. It was found participants that endorsed high-betrayal trauma, not low-betrayal trauma, were more prone to experiences of shame and dissociation when viewing images of interpersonal threat, suggesting the intensity of trauma experiences may influence later experiences of shame and dissociation.

Shame in traumatised individuals is often ignored by researchers and clinicians (Dorahy, 2010). Although, it has been proposed that when one is shamed repeatedly they will act to eliminate this negative state in ways that may lead to depression (e.g., attacks on self), acting out, avoidance, and dissociation (Andrews, Valentine, Valentine 1995; Harder & Lewis 1986; Lewis 1992). Dissociation may be employed to moderate and possibly even eradicate one's experience of shame (Feiring, Taska, & Lewis, 1996; Lewis, 1992). For example, dissociative symptoms have been linked to sexual abuse, where it has been suggested the association may be mediated by shame (Lewis, 1992; Ross 1989). Consequently, abuse may lead to shame, which due to its intensity may produce dissociation and likely impact psychological functioning.

It is evident literature on the association between shame and dissociation has received very little attention. A recent study investigated whether patients with borderline personality

disorder (BPD) had a stronger shame reaction after an emotion induction exercise, specifically designed to induce shame (Scheel et al., n.d.). While the study did not look specifically at the association between shame and dissociation it found that BPD patients reported higher shame and sadness ratings overall in comparison to a major depressive disorder (MDD) group, as well as higher negative ratings of all emotions in comparison to the healthy control group. Such findings raise the question of the psychological mechanisms associated with shame in psychiatric disorders.

### ***1.6 The Present Study***

The present study sought to better understand shame, specifically with regard to its non-verbal marker of eye gaze diversion, and its association with dissociation. It aimed to identify the immediate behavioural (gaze diversion) and psychological (dissociation) effects following a potentially shameful event. Specifically the study sought to investigate eye-gaze diversion during shame-induced, script-driven narratives. While participants were reading the narratives during shame induction they were either looking at themselves, the experimenter, or a neutral image. These different conditions allow both internal (looking at self) and external (looking at experimenter) shame to be examined within the study. This study also seeks to examine whether or not symptoms of dissociation occur during an induction of shame, through self-report measures. Furthermore, this study will examine participants' physiological arousal during an induction of shame through the monitoring of heart rate. Finally, shame will be examined as a traumatic experience by ascertaining whether shame inductions resulted in later intrusive memories in participants. The current study will involve collecting measures of shame, dissociation, state emotional experience and physiological arousal, during the shame induction, in addition to the completion of an intrusion diary after the induction.

### *1.6.1 Hypotheses*

*Hypothesis One:* Individuals will divert their gaze more in the shame condition when looking at themselves or the experimenter compared to the neutral screen. There will be no difference in eye gaze diversion between internal and external shame. This was expected as literature shows shame associated with gaze diversion when one feels exposed to the self or others.

*Hypothesis Two:* Dissociation during shame induction will be higher in participants who looked at themselves in a mirror (internalised shame) or at the experimenter (externalised shame) compared to the neutral condition where participants look at a neutral screen, indicating greater use of dissociation as a means of regulating shame.

*Hypothesis Three:* Participants looking at themselves or the experimenter will have more memories of the shame scenario over a period of two days following the study, than those participants in the neutral condition. That is, the inductions involving internal and external shame were expected to be more distressing (leading to more intrusions) than the neutral induction.

## CHAPTER 2

### METHOD

#### *2.1 Participants*

Participants were 33 individuals who were seeking counselling for psychological or relationship difficulties at the time of the research, and were recruited through a number of counselling services and support groups (see Appendix A).

Of the 33 participants, 54.5% ( $n = 18$ ) were female and 45.5% ( $n = 15$ ) were male. The age of participants ranged from 19 years to 63 years, with a mean of 36.1 years. In regards to ethnicity, 78.8% ( $n = 26$ ) identified as New Zealand European and 3% ( $n = 1$ ) as Māori. The remaining 18.2% ( $n = 6$ ) indicated their ethnicity as Chinese, Korean, German, British, Dutch and ‘Other’. In terms of reason for seeking counselling 24.2% ( $n = 8$ ) identified their main reason as anxiety, 21.2% ( $n = 7$ ) depression, 30.3% ( $n = 10$ ) trauma/PTSD, 6.1% ( $n = 2$ ) grief, 6.1% ( $n = 2$ ) relationship difficulties, 6.1% ( $n = 2$ ) personal growth, 3% ( $n = 1$ ) anorexia and 3% ( $n = 1$ ) personality problems.

#### *2.2 Measures*

In addition to four brief questions pertaining to demographic information (sex, age, ethnicity and reason for seeking counselling), this study utilised questionnaires to assess trait and state dissociation, and trait and state shame. In addition, physiological and behavioural assessments were made of heart rate, heart rate variability, non-verbal behaviours (e.g., gaze diversion) and post-study intrusions of the experimental stimuli. All questionnaires were presented and completed online using Qualtrics Survey Software. Questionnaire responses and layout were kept identical to original paper versions.

### *2.2.1 Dissociative Experience Scale (DES)*

The DES (Bernstein & Putnam, 1986) measures experiences of dissociation during daily life (see Appendix F). The DES is a self-assessment questionnaire comprising 28 items, assessing areas of amnesia, depersonalisation/derealisation, and absorption. An example item which reflects amnesia is “some people have the experience of finding themselves in a place and having no idea how they got there”. Each item is rated as a percentage, between 0 and 100 in 10 point increments, of how often the experience occurs, with higher scores indicating more frequent dissociation. The DES is a psychometrically sound measure of dissociation with excellent internal consistency in clinical samples ( $\alpha = 0.97$ ; test-retest,  $r = 0.93$ ; Dubester & Braun, 1995). Similarly, item-scale score (i.e. amnesia, depersonalisation/derealisation, absorption) correlations were all significant, indicating good internal consistency and construct validity (Bernstein & Putnam, 1986). The DES was used in the current study as a measure of trait dissociation and demonstrated good internal consistency for DES-total ( $\alpha = 0.95$ ) and DES-taxon ( $\alpha = 0.81$ ).

### *2.2.2 Experience of Shame Scale (ESS)*

The ESS is designed to measure experiences of shame at any time during the past year (Andrews, Qian, & Valentine, 2002) (see Appendix G). The ESS assesses the areas of characterological shame (e.g., shame of personal habits), behavioural shame (e.g., shame about doing something wrong), and bodily shame (e.g., feeling ashamed of one’s own body) through 25 items. An example item which reflects bodily shame is “have you wanted to hide or conceal your body or any part of it?” Each item is rated on a 4-point scale ranging from 1 (“not at all”) to 4 (“very much”), with higher ratings reflecting a higher level of shame. The total score of the ESS has yielded a high internal consistency ( $\alpha = 0.92$ ), and test-retest reliability is also high when examined over an 11 week period ( $\alpha = 0.83$ ; Andrews et al., 2002). Further, evidence has been provided for construct validity, as the ESS total and the

component subscales all significantly correlated with the Test of Self-Conscious Affect's shame scale (TOSCA; Tangney, Wagner, Fletcher, & Gramzow, 1992). The ESS was used in the current study as a measure of trait shame and demonstrated good internal consistency for characterological shame ( $\alpha = 0.88$ ), behavioural shame ( $\alpha = 0.83$ ), bodily shame ( $\alpha = 0.83$ ) and total shame ( $\alpha = 0.93$ ).

### *2.2.3 Peritraumatic Dissociative Experiences Questionnaire (PDEQ)*

To measure current feelings of dissociation the modified PDEQ was employed (see Appendix H). The modified PDEQ (Marshall et al., 2002) consists of eight self-report items, rated on a 5-point scale from 0 ("not at all true") to 4 ("very much true"). Four items on the PDEQ aim to assess alterations in consciousness, while the remaining four are thought to assess structural dissociation, allowing for potential differentiation between the two forms of dissociation. The modified PDEQ has been found to be a satisfactorily valid and reliable instrument for the measurement of current state dissociative symptoms, with an adequate level of internal consistency ( $\alpha = 0.83$ ; Marshall et al., 2002). It has also exhibited good test-retest reliability ( $\alpha = 0.85$ ; Marshall et al., 2002), as well as convergent validity, which was established through a strong correlation between the original PDEQ and modified PDEQ ( $r = 0.89$ ; Marshall et al., 2002). The modified PDEQ was used here to assess the degree of dissociation experienced during the experimental procedure in a succinct manner. Internal consistency for the current study was good for shame ( $\alpha = 0.89$ ) and neutral induction ( $\alpha = 0.79$ ).

### *2.2.4 State Shame and Guilt Scale (SSGS)*

The SSGS (Marshall, Saftner, & Tangney, 1994) assesses current feelings of shame, pride, and guilt (see Appendix I). The SSGS is a 15 item scale with 5 items measuring each of the 3 self-conscious emotions. Responses are made on a 5-point scale, where 1 is "not

feeling this way at all” and 5 is “feeling this way very strongly”. Higher scores indicate more state shame, guilt, and pride. “I feel worthless, powerless” and “I feel small” are example statements of shame items. Internal consistency for the SSGS has been found to be good ( $\alpha = 0.87$ ; Stoeber, Harris, & Moon, 2007;  $\alpha = 0.88$  (Stoeber, Kempe & Keogh, 2008). The SSGS has also established good inter-item reliability for guilt ( $\alpha = 0.82$ ), pride ( $\alpha = 0.87$ ) and shame ( $\alpha = 0.89$ ) (Marschall et al., 1994). The SSGS was used here as a validity measure to assess whether the experimental task induced shame over other self-conscious emotions (e.g., guilt), therefore only the shame subscale was interpreted. Internal consistency in the current study was good for shame ( $\alpha = 0.90$ ) and neutral induction ( $\alpha = 0.91$ ).

#### 2.2.5 Additional Scales

In order to assess the exact emotion/s participants experienced following each induction, sliding scales were used for a list of emotions (anger, shame, sadness, disgust, surprise, anxiety, embarrassment, guilt, and pride). Participants identified which emotion/s they experienced as well as the degree to which the emotion/s were felt during and/or immediately after each induction task. Responses ranged between 0 and 100, where 0 indicated “not at all” and 100 indicated “completely”. Furthermore, participants were also asked to rate how absorbed they felt in each induction task (i.e. narrative) on the same scale. The emotion and absorption questions were asked to assess how effective the shame induction narratives were in producing the shame emotion and how absorbed participants felt during each induction task.

#### 2.2.6 Condition

Participants were randomly assigned to one of three conditions; experimenter, self, and neutral. The *experimenter* condition required participants to look through a window at the experimenter (external shame) while verbalising the shame and neutral narratives.

Participants in the *self* condition were asked to look into their own eyes (internal shame) by looking at a mirror whilst verbalising narratives. Lastly, participants in the *neutral* condition were required to look at white strips on a black screen whilst verbalising narratives.

### 2.2.7 Shame Induction

In order to experimentally induce shame, participants were instructed to listen through headphones to a recorded narrative and repeat verbally, a 1) shame and 2) associated neutral scenario. The motif for each scenario was chosen from a possible three vignettes that were used in an earlier study (McKendry, 2013). This study had shame-related scenarios involved being caught masturbating by a family member, having soiled underwear in a swimming pool changing room, and having mucus on ones face at a bank. The current study adopted the ‘bank’ scenario as it was deemed the most appropriate given the participants selected for the study, as some participants had abuse histories and it was felt the masturbation scenario may have activated too much distress.

Participants were in counselling at the time of the study and it was believed a clinical population would be more susceptible to the shame induction. The ‘bank’ scenario was thought to cause least offence but also had the capacity to elicit shame responses (McKendry, 2013). The scenario outlined a situation where the participants were publically ridiculed by a bank teller for having mucus on their face while making a transaction. The neutral (control) scenario used exactly the same setting and situation (transaction in a bank), but replaced shame-evoking stimuli with neutral stimuli (See Appendix J for shame and neutral inductions). Participants heard each narrative one line at a time using pronouns given in the second person (e.g., ‘you went into the bank’) and had to repeat each line using first person pronouns (e.g., ‘I went into the bank’). To ensure experimental control, the order in which participants verbalised the shame and neutral scenarios were counterbalanced. The pairing of scenario (shame, neutral) and experimental condition (between subject variable;



experimenter, self, neutral) was also randomised to ensure experimental control within the study. An image of the final set up can be found in Appendix M.

While completing the scenarios task in one of the 3 conditions, participants' non-verbal behaviours (e.g., gaze diversion) were measured via video recorder. These non-verbal behaviours were coded using Ekman and Friesen's Facial Action Coding System (FACS: Ekman & Friesen, 1976, 1978), a system which categorises the physical expression of emotions. FACS (Appendix N) lists 44 visually distinguishable facial expressions while separating these into categories of head and eye movements. The scenarios utilised in the current research were designed in such a way that non-verbal behaviours could be recorded with regard to what word/words and line of narrative the participant was verbalising at the time. For example, if a participant were to smile, that non-verbal behaviour would be coded as a smile at the point in the narrative it occurred, including whether the narrative was being heard or spoken. Behaviours were coded separately or in combination with each other if behaviours occurred simultaneously.

#### *2.2.8 Physiological Measures*

BioPac was used during the inductions in order to examine the differences equated in heart rate (number of heart beats per minute), LogHRV (variation in the time interval between heartbeats) and LogRSA (basic measure of vagal/parasympathetic tone measuring the maximum and minimum changes in heart rate during respiration) in shame and neutral scenarios. To prepare for the physiological recording, the experimenter attached two electrodes to the skin just below each elbow on the inside of the arm, and one on the right wrist. The electrode on the wrist served as a ground. The electrode leads were plugged into an AC amplifier and the ECG signal, sampled at .5-35 Hz, with a 50/60Hz notch and amplified 1000 times, which was recorded using BioPac Student Lab Software.

### *2.2.9 Intrusion Diary*

Following the completion of the shame induction and questionnaires, participants were given a diary to record whether they had any intrusions (e.g., thoughts, memories, feelings) related to the content of the shame and neutral induction over the 2 day period following the study (See Appendix K). This ‘intrusion’ period began as soon as participants left the assessment session and ended with a follow-up assessment 2 days later. During this time participants recorded the time and description of each intrusion. In addition, participants recorded their perceived level of emotional distress during each intrusion on a Subjective Unit of Distress Scale (SUDS; Wolpe, 1969), ranging from 0 (“totally relaxed, no emotion”) to 10 (“highest emotion you have ever felt”). Participants were also asked to write down any feelings they experienced during the intrusion and a description of the intrusion’s contents.

### *2.3 Laboratory*

Arrangement of the room in which the experiment took place was set up in such a way that video recording and sound quality were optimised. In order to achieve this, the windows were covered with black plastic sheets and any reflective surfaces were concealed, to minimise light which otherwise may have shown the function of the one-way mirror.

The one-way mirror was constructed to be used simply, without participants being aware of its true function (i.e. when the participant is looking at the experimenter the experimenter is not able to see the participant as they may believe). Furthermore, this mirror was created on a portable stand that could be moved and turned effortlessly, allowing for a simple adjustment between conditions. The one-way mirror was purposefully placed so that when each participant entered the lab they were unaware of its true function.

In the neutral condition a lamp was placed nearby, to the side of the portable mirror, to allow participants to view the white strips on the black screen that sat in front of the mirror, as well as adding light to the room in order for the camera to capture the participants’

facial behaviours. This ensured a clear view of the participant on the video recording, improving the ability to recognise facial behaviours.

Lastly, the portable mirror was able to be adjusted to complement the height of each participant, to allow for effective recording of participants facial features during the experiment, which was done with a video recorder attached on top of the portable mirror.

## ***2.4 Procedure***

Prior to commencement, ethical approval for this study was granted by the University of Canterbury Human Ethics Committee (approval letter can be seen in Appendix E). The study was advertised in counselling agencies (see Appendix D).

Upon showing interest in participating in the study participants were emailed or called and provided with location details and a time suitable to the participant was arranged. Participants were also given an opportunity to ask any questions they currently had. Those who initially consented to partake in the study were given an information sheet outlining the study (Appendix B). Additionally, verbal instructions outlining the study's expected duration, confidentiality procedures and remuneration were provided for further understanding. Moreover, clarification was given regarding participants' right to withdraw from the study after reading the information sheet. Any questions were answered by the experimenter and consent forms were signed (Appendix C).

Participants were verbally instructed "First I will get you to complete a questionnaire asking about some emotions and experiences you may have and how you respond to them. You will not be asked to give any personal details about your experiences, just the degree to which you feel them. We are interested in getting as accurate a snapshot of your experience as possible. So please be as honest as you can, regardless of your answer."

The researcher then administered the first set of questionnaires which consisted of demographic questions (i.e. age, sex and ethnicity), trait shame (Experience of Shame Scale), trait dissociation (Dissociative Experience Scale).

After completing the questionnaire participants were then asked to place themselves in front of the mirror, after which three BioPac leads were attached; one on each of the participants' inner elbows, and a third placed on an inner wrist, to record participants physiological measures (e.g. heart rate) during the induction procedure. While the leads were being attached the researcher ensured participants that they were safe. Participants were then provided with further instruction regarding the first block of the experiment.

Participants were informed "you are going to hear a story broken into sentences. After each sentence, I would like you to repeat the sentence. However, the sentences you hear are in the second person, for example you will hear "you rode the bike". Your task is to repeat the sentence, but in the first person, for example, "I rode the bike". I would ask that you concentrate your efforts on looking at your eyes/ my eyes/ the white strips (depending on participant condition). And please keep your arms on the arms of the chair and as still as possible. Also, we would ask that you get as absorbed as you can in the story. Try imagining yourself fully in the story". The researcher began recording on the video recorder at this point.

Additionally, participants completed a practice block which comprised three neutral sentences. The practice was designed in order for participants to understand how to verbally convert the sentences heard from a second person narrative to a first person narrative, and if necessary the researcher provided further explanation. The researcher used this practice block as the baseline for physiological measures and subsequently each induction block as separate segments.

Upon completion of the first induction block (i.e. shame and neutral) participants went on to complete state dissociation (modified PDEQ), state shame (SSGS), as well as scales measuring the degree to which participants felt certain emotions during/immediately after the induction, and additionally two questions regarding the degree to which they felt absorbed in the story. As before, participants were given the same instructions preceding completion of the questionnaires.

With the exception of the opposite narrative to Block 1 being presented, Block 2 followed the same structure and procedure as Block 1. As before, instructions were given to participants. Again, state shame and dissociation scales were completed following this, as well as the scale pertaining to the degree certain emotions were felt during the induction and how much participants felt a part of the story.

Lastly, participants were given the intrusion diary. Participants completed this diary over the two days following the experimental assessment, after which participants returned the diaries to the experimenter. Overall, although time varied with each participant, the study took approximately 30 minutes, with the exception of the intrusion diary which was completed over a period of two days.

Participants were debriefed (see Appendix L) and thanked at the end of the study. Participants were also given \$30 in petrol and grocery vouchers for participating in the study. Additionally, participants were given a list of helpful contacts if they required additional support.

## ***2.5 Data Analysis***

All data gathered was coded and entered into the statistical programme Statistical Package for Social Sciences 17 (SPSS Inc., Chicago, Illinois). Following descriptive statistical analyses, Wilk's Lambda was used as the significance test in overall analysis of variance (ANOVA) calculations. Statistical significance was set at the  $p < 0.05$  level.

In order to determine if any significant differences existed across age and sex measures (e.g., shame and dissociation) for the three conditions (i.e., when participants looked at themselves in a mirror, looked at the researcher or the neutral screen), a one-way between subjects analysis of variance (ANOVA) was conducted for age, and a chi square analysis was conducted for sex. To assess the ability of the experimental induction to induce shame, self-report ratings of nine different emotions (i.e., anger, shame, sadness, disgust, surprise, anxiety, embarrassment, guilt and pride) rated after the neutral and shame inductions were examined using a 2 (induction: neutral, shame) by 3 (condition: experimenter, self and neutral) mixed multivariate analysis of variance (MANOVA). To further examine the ability of the shame induction to elicit shame, a two-way mixed ANOVA (induction x condition) was conducted to examine if state shame ratings differed from baseline (prior to hearing the audio narratives) to post narratives (neutral and shame), across the three conditions. Finally, a two-way mixed ANOVA was conducted to assess the difference in degree to which participants felt a part of and absorbed in both the neutral and shame narratives across all three conditions.

### *2.5.1 Process for Examining Gaze Diversion*

To assess gaze diversion, video recordings were viewed following experimental induction and instances of gaze diversion were coded (e.g. gaze diversion to the left) using the FACS, by two coders to maximise coding consistency of participants' non-verbal behaviours. To directly test hypothesis one audio narratives (shame and neutral) heard by participants were broken into three sentence types (neutral, shame/shame equivalent and residual shame/residual shame equivalent; see Appendix J). Three sentences of each narrative were deemed neutral, six sentences as shame/shame equivalent and three sentences as residual shame/residual shame equivalent. Neutral sentences were sentences at the beginning of narratives which were deemed not shame evoking in nature. Shame sentences were coded

as sentences in the shame narrative due to their potential shameful nature, whereas shame equivalent sentences were the sentence alternatives in the neutral narrative. Residual shame/residual shame equivalent sentences were sentences following the previous shame and shame equivalent sentences in the shame and neutral narratives respectively. Sentence types were examined across the three conditions (self, experimenter and neutral screen) in a 2 (audio narratives: shame, neutral) x 3 (sentence type: neutral, shame/shame equivalent, residual shame/residual shame equivalent) x 3 (condition: self, experimenter, neutral screen) mixed ANOVA. Additional tests were utilised to further examine induction effects on eye gaze diversion. The dependent variable was the frequency participants diverted eye gaze.

#### *2.5.2 Process for Examining State Dissociation following Shame Induction*

To test hypothesis two, a two-way mixed ANOVA was conducted to examine if state dissociation differed across conditions (self, experimenter and neutral screen) for both the neutral and shame inductions. Additionally, post hoc tests were utilised to further examine simple effects.

#### *2.5.3 Process for Examining Intrusions following Shame Induction*

To test hypothesis three, a mixed ANOVA was conducted to examine if intrusion frequency differed across experimenter, self and neutral conditions for both day one and two as reported within the intrusion diaries.

## CHAPTER 3

### RESULTS

#### *3.1 Experimental Condition Characteristics and Manipulation Checks*

No significant differences were found for age across the three experimental conditions (experimenter, self, neutral),  $F(2, 30) = 1.57, p = .23$  (see Table 1).

Table 1  
*Descriptive Statistics for Age across Conditions*

Age	Mean; M (Standard Deviation; SD)
<b>Experimenter</b>	30.82 (15.34)
<b>Self</b>	41.27 (11.21)
<b>Neutral</b>	36.18 (14.65)

Similarly, no significant differences were found for sex across experimental condition,  $\chi^2(2, N = 33) = 2.93, p = .23$  (See Table 2).

Table 2  
*Descriptive Statistics for Sex across Conditions*

Sex	Experimenter	Self	Neutral
<b>Male</b>	5	7	3
<b>Female</b>	6	4	8

Tables 3 and 4 display ethnicity and reason for counselling across experimental conditions. Further analyses were not conducted as some cells had zero participants.



Table 3  
*Descriptive Statistics for Ethnicity across Conditions*

<b>Ethnicity</b>	<b>Experimenter</b>	<b>Self</b>	<b>Neutral</b>
<b>New Zealand European</b>	9	9	8
<b>Maori</b>	0	0	1
<b>Chinese</b>	0	0	1
<b>Korean</b>	1	0	0
<b>Dutch</b>	0	1	0
<b>British</b>	1	0	0
<b>German</b>	0	1	0
<b>Other</b>	0	0	1

Table 4  
*Descriptive Statistics for Reasons for Seeking Counselling across Conditions*

<b>Reason for Seeking Counselling</b>	<b>Experimenter</b>	<b>Self</b>	<b>Neutral</b>
<b>Anxiety</b>	2	3	3
<b>Depression</b>	4	0	3
<b>Grief</b>	0	2	0
<b>Personal Growth</b>	0	1	1
<b>Personality Problems</b>	0	0	1
<b>Trauma/PTSD</b>	4	4	2
<b>Relationship Difficulties</b>	0	1	1
<b>Anorexia</b>	1	0	0

Exploratory data analysis for questionnaire measures revealed significant skewness for DES-taxon, state shame across baseline, neutral and shame conditions and PDEQ for neutral and shame conditions. Log transformations were used on these variables to normalise the data. Descriptive statistics can be found in Table 5. MANOVA analyses examining differences across groups for trait measures produced no multivariate significant differences,  $F(10, 54) = .88, p = .56, \eta_p^2 = .14$ . As a result there was no univariate effect for ESS

characterological shame,  $F(2, 30) = .43, p = .65, \eta_p^2 = .03$ ; ESS behavioural shame,  $F(2, 30) = 1.81, p = .18, \eta_p^2 = .11$ ; ESS bodily shame,  $F(2, 30) = 1.41, p = .26, \eta_p^2 = .09$ ; ESS total shame,  $F(2, 30) = .87, p = .43, \eta_p^2 = .06$ ; DES-total,  $F(2, 30) = .75, p = .48, \eta_p^2 = .05$ ; or DES-taxon,  $F(2, 30) = 1.45, p = .25, \eta_p^2 = .09$ .

Table 5  
*Descriptive Statistics for Questionnaire Measures across Conditions*

Questionnaire Measures	Condition <i>n</i> = 33	Mean	Standard Deviation
<b>ESS Characterological Shame</b>	Experimenter	27.45	4.95
	Self	28.18	8.96
	Neutral	30.27	7.71
<b>ESS Behavioural Shame</b>	Experimenter	26.45	4.46
	Self	22.45	5.68
	Neutral	26.09	6.11
<b>ESS Bodily Shame</b>	Experimenter	11.27	3.41
	Self	9.9	2.95
	Neutral	11.09	3.73
<b>ESS Total Shame</b>	Experimenter	65.18	9.44
	Self	59.73	15.80
	Neutral	67.45	16.07
<b>DES Total</b>	Experimenter	21.28	13.75
	Self	16.37	17.41
	Neutral	24.95	17.93
<b>DES Taxon</b>	Experimenter	.85	.66
	Self	.45	.83
	Neutral	.97	.74

### 3.1.1 Emotion Ratings

To examine changes in self-reported individual emotions (e.g., anger, shame, embarrassment, guilt) a 2 (induction: neutral, shame) by 3 (condition: experimenter, self and

neutral) mixed MANOVA was conducted on all nine emotions assessed. Descriptive statistics can be found in Table 6. There were no multivariate main effects for condition (experimenter, self and neutral), indicating emotional ratings did not differ across the three conditions for overall emotion ratings. Given the diversity of emotions the univariate analyses were examined and showed a significant effect for guilt across conditions,  $F(2, 30) = 3.23$ ,  $p = .05$ ,  $\eta_p^2 = .18$ . Post hoc tests show higher guilt ratings in the neutral versus experimenter ( $p = .04$ ) and self ( $p = .03$ ) condition. The multivariate main effect for emotion reached significance, indicating more emotional arousal following the shame induction,  $F(9, 22) = 2.80$ ,  $p = .02$ ,  $\eta_p^2 = .53$ . Significant increases were found in shame induction compared to neutral induction for anger,  $F(1, 30) = 10.28$ ,  $p = .003$ ,  $\eta_p^2 = .26$ ; shame,  $F(1, 30) = 19.69$ ,  $p = .00$ ,  $\eta_p^2 = .40$ ; sadness,  $F(1, 30) = 12.47$ ,  $p = .001$ ,  $\eta_p^2 = .29$ ; disgust,  $F(1, 30) = 6.07$ ,  $p = .02$ ,  $\eta_p^2 = .17$ ; anxiety,  $F(1, 30) = 17.26$ ,  $p = .00$ ,  $\eta_p^2 = .37$ ; embarrassment,  $F(1, 30) = 17.12$ ,  $p = .00$ ,  $\eta_p^2 = .36$ ; and guilt,  $F(1, 30) = 4.54$ ,  $p = .04$ ,  $\eta_p^2 = .13$ . No significant differences were found across inductions for surprise,  $F(1, 30) = .94$ ,  $p = .34$ ,  $\eta_p^2 = .03$ . Additionally, there was no multivariate interaction between emotion and condition,  $F(18, 46) = .78$ ,  $p = .71$ ,  $\eta_p^2 = .23$ , and no interactions were found at a univariate level. This indicates that the shame induction was effective in eliciting higher emotion (i.e., anger, shame, sadness, disgust, anxiety, and embarrassment) than the neutral induction.

Table 6  
*Descriptive Statistics for Emotion across Conditions*

Emotion	Induction	Experimenter	Self	Neutral
		M (SD)	M (SD)	M (SD)
Anger	Neutral	6.09 (20.20)	.09 (.30)	.36 (1.21)
	Shame	29.27 (37.49)	17.91 (34.36)	9.91 (16.56)
Shame	Neutral	10.27 (18.85)	1.36 (3.41)	3.64 (7.72)
	Shame	27.18 (30.38)	18.36 (25.44)	33.55 (34.15)
Sadness	Neutral	4.82 (13.14)	2.09 (6.93)	2.45 (6.33)
	Shame	18.45 (28.76)	19.55 (30.53)	25.91 (36.76)
Disgust	Neutral	4.55 (15.08)	.00 (.00)	6.45 (14.10)
	Shame	10.64 (18.86)	17.91 (27.02)	19.27 (30.70)
Surprise	Neutral	9.82 (14.41)	14.18 (26.70)	14.36 (23.69)
	Shame	14.55 (19.75)	22.64 (31.54)	17.55 (18.66)
Anxiety	Neutral	22.82 (28.20)	7.45 (14.40)	19.91 (17.98)
	Shame	31.82 (31.67)	29.45 (27.02)	39.27 (31.05)
Embarrassment	Neutral	7.27 (13.81)	5.09 (11.17)	21.09 (29.12)
	Shame	28.00 (30.11)	31.73 (35.01)	46.18 (37.31)
Guilt	Neutral	.36 (.92)	.73 (2.41)	14.36 (29.64)
	Shame	6.00 (19.90)	3.45 (7.70)	26.00 (35.34)
Pride	Neutral	6.09 (12.87)	18.00 (26.51)	11.00 (18.22)
	Shame	.45 (1.21)	3.82 (6.48)	11.00 (23.19)

### 3.1.2 Physiological Measures

Three one-way ANOVA's were conducted to test three different physiological measures across conditions. Descriptive statistics can be found in Table 7. No effects were found for mean heart rate,  $F(2, 30) = .15, p = .86$ ; LogHRV,  $F(2, 30) = .21, p = .82$ ; or LogRSA,  $F(2, 30) = .04, p = .96$ . This indicates there were no differences between participants' physiological measures between conditions.

Table 7  
*Descriptive Statistics for Physiological Measures across Conditions*

Physiological Measure	Condition	M (SD)
Mean Heart Rate	Experimenter	80.70 (13.85)
	Self	78.80 (14.05)
	Neutral	77.55 (12.88)
LogHRV	Experimenter	7.04 (.97)
	Self	7.30 (1.05)
	Neutral	7.10 (.95)
LogRSA	Experimenter	5.19 (1.68)
	Self	5.35 (1.75)
	Neutral	5.38 (1.35)

### 3.1.3 State Shame Measures

Mixed ANOVA analyses examining state shame scores for condition (experimenter, self, neutral) by emotion (baseline, neutral narrative, shame narrative) produced a significant main effect for emotion,  $F(2, 60) = 8.03, p = .001, \eta_p^2 = .21$ . A one way repeated measures ANOVA on the emotion main effect utilising simple contrasts found higher state shame scores following the shame induction compared to the neutral induction,  $F(1, 32) = 14.35, p = .001, \eta_p^2 = .31$ . Higher state shame scores were also evident following the shame induction when compared to baseline, however this effect fell marginally short of significance,  $F(1, 32) = 3.09, p = .09, \eta_p^2 = .09$ . There was no main effect for condition,  $F(2, 30) = .92, p = .41, \eta_p^2 = .06$  and no significant emotion by condition interaction,  $F(4, 60) = .93, p = .45, \eta_p^2 = .06$ . This indicates participants experienced higher levels of shame following shame inductions compared to neutral inductions and baseline. Descriptive statistics can be found in Table 8.

Table 8

*Descriptive Statistics for State Shame across Conditions*

<b>Condition</b>	<b>Baseline</b>	<b>Shame</b>	<b>Neutral</b>
	<b>M (SD)</b>	<b>M (SD)</b>	<b>M (SD)</b>
<b>Experimenter</b>	.95 (.20)	.92 (.22)	.83 (.17)
<b>Self</b>	.83 (.19)	.92 (.24)	.74 (.13)
<b>Neutral</b>	.89 (.24)	1.03 (.26)	.85 (.15)

*3.1.4 Degree to Which Participants Felt a Part of and Absorbed in Narratives*

A 2 (emotion: neutral, shame) by 3 (condition: experimenter, self and neutral) mixed ANOVA for the degree to which participants felt a part of the story produced no main effects for emotion,  $F(1, 30) = .08, p = .78, \eta_p^2 = .003$ ; or condition,  $F(2, 30) = 1.03, p = .37, \eta_p^2 = .06$ . Furthermore, there was no significant interaction effect for emotion by condition,  $F(2, 30) = .71, p = .50, \eta_p^2 = .05$ . Whilst the statistics indicate that the groups did not differ on their sense of being involved in the story, ratings were generally quite low, suggesting that participants only moderately felt a part of the story. Descriptive statistics can be found in Table 9.

Table 9

*Descriptive Statistics for Degree to Which Participants Felt a Part of Narratives*

<b>Narrative</b>	<b>Experimenter</b>	<b>Self</b>	<b>Neutral</b>
	<b>M (SD)</b>	<b>M (SD)</b>	<b>M (SD)</b>
<b>Neutral</b>	2.91 (1.04)	3.45 (.82)	3.64 (.92)
<b>Shame</b>	3.27 (.91)	3.55 (1.13)	3.36 (1.12)

A 2 (emotion: neutral, shame) by 3 (condition: experimenter, self and neutral) mixed ANOVA for the degree to which participants felt absorbed in the story produced no main effects for emotion,  $F(1, 30) = 1.57, p = .22, \eta_p^2 = .05$ , or condition,  $F(2, 30) = .46, p = .64,$

$\eta_p^2 = .03$ . Moreover, there was no significant interaction effect for emotion by condition,  $F(2, 30) = .52, p = .60, \eta_p^2 = .03$ . Again, whilst the statistics indicate that the groups did not differ on their sense of being absorbed in the story; ratings were generally quite low, suggesting that participants only moderately felt absorbed in the story. Descriptive statistics can be found in Table 10.

Table 10  
*Descriptive Statistics for Degree to Which Participants Felt Absorbed in Narratives*

Narrative	Experimenter	Self	Neutral
	M (SD)	M (SD)	M (SD)
Neutral	2.91 (1.22)	3.27 (1.19)	3.55 (1.13)
Shame	3.45 (.82)	3.55 (1.21)	3.55 (.93)

### *3.2 Test of Hypothesis One - If eye gaze diversion is associated with shame generally, or more associated with internal shame, or external shame*

Four participants were omitted due to eye gaze not being adequately recorded (e.g. camera too low to record eyes). A 2 (emotion: neutral, shame) by 3 (condition: experimenter, self and neutral) mixed ANOVA for gaze diversion for spoken sentences produced a main effect for emotion,  $F(1, 26) = 6.43, p = .02, \eta_p^2 = .20$ . Gaze diversion was significantly higher when verbalising the shame narrative than the neutral narrative. There were no main effects for condition,  $F(2, 26) = .31, p = .74, \eta_p^2 = .02$ . No significant emotion by condition interaction was found,  $F(2, 26) = .82, p = .45, \eta_p^2 = .06$ . These results indicate participants' frequency of gaze diversion was higher when verbalising shame narrative than neutral narrative. Descriptive statistics can be found in Table 11.

Table 11

*Descriptive Statistics for Gaze Diversion whilst Verbalising Shame or Neutral Narratives*

Narrative	Experimenter	Self	Neutral
	M (SD)	M (SD)	M (SD)
Neutral	2.4 (3.03)	2.11 (5.01)	.50 (.71)
Shame	3.1 (3.87)	3.11 (5.80)	2.70 (2.71)

To directly test hypothesis one for shame sentences verbalised, a one-way ANOVA was conducted. Descriptive statistics can be found in Table 12. No main effect for condition was found,  $F(2, 26) = .03$ ,  $p = .97$ ,  $\eta_p^2 = .00$ . This result indicates there was no difference in frequency of eye gaze diversion across the three conditions when verbalising shame sentences.

Table 12

*Gaze Diversion Frequency for Verbalised Shame Sentences*

	Experimenter	Self	Neutral
	M (SD)	M (SD)	M (SD)
Gaze Diversion	3.10 (3.87)	3.11 (5.80)	2.70 (2.71)

A mixed ANOVA for gaze diversion for verbalised sentences for both shame and shame equivalent sentences found a significant effect for emotion,  $F(1, 26) = 7.27$ ,  $p = .01$ ,  $\eta_p^2 = .22$ ; indicating eye gaze diversion was higher when verbalising the shame sentences compared to shame equivalent sentences (see Table 13). However, there were no main effects for condition,  $F(2, 26) = .28$ ,  $p = .76$ ,  $\eta_p^2 = .02$ . This indicates eye gaze diversion did not differ significantly across conditions during spoken sentences when the shame and shame-equivalent sentences were collapsed together. No significant emotion by condition interaction effect was found,  $F(2, 26) = .30$ ,  $p = .74$ ,  $\eta_p^2 = .02$ .



Table 13

*Gaze Diversion for Verbalised Sentences for Shame and Shame Equivalent Sentences*

<b>Sentences</b>	<b>Experimenter</b>	<b>Self</b>	<b>Neutral</b>
	<b>M (SD)</b>	<b>M (SD)</b>	<b>M (SD)</b>
<b>Shame Equivalent</b>	1.30 (1.42)	1.00 (2.35)	.40 (.70)
<b>Shame</b>	2.00 (2.16)	1.67 (3.57)	1.60 (1.65)

To determine whether verbalised shame sentences in shame narrative had higher eye gaze diversion than verbalised: 1) shame equivalent sentences in the neutral narrative, 2) neutral sentences in the neutral narrative, 3) neutral sentences in the shame narrative, 4) residual sentences in the neutral narrative, and 5) residual sentences in the shame narrative, a repeated measures ANOVA was computed. Descriptive statistics can be found in Table 14. A main effect was found,  $F(5, 24) = 8.85, p = .00, \eta_p^2 = .24$ . Eye gaze diversion during the verbalised shame sentences in the shame narrative were significantly higher than neutral sentences in the neutral narrative,  $F(1, 28) = 12.20, p = .002, \eta_p^2 = .30$ ; neutral sentences in the shame narrative,  $F(1, 28) = 9.60, p = .004, \eta_p^2 = .26$ ; shame equivalent sentences in the neutral narrative,  $F(1, 28) = 7.79, p = .01, \eta_p^2 = .22$ ; residual sentences in the neutral narrative,  $F(1, 28) = 15.95, p = .00, \eta_p^2 = .36$ ; and residual sentences in the shame narrative,  $F(1, 28) = 15.21, p = .001, \eta_p^2 = .35$ . This indicates gaze diversion was significantly higher when verbalising shame sentences in the shame narrative compared to all other sentence types in both shame and neutral narratives.

Table 14  
*Descriptive Statistics for Gaze Diversion*

	<b>M (SD)</b>
<b>Shame Narrative - Shame Sentences</b>	1.76 (2.46)
<b>Neutral Narrative - Shame Equivalent Sentences</b>	.90 (1.59)
<b>Shame Narrative - Neutral Sentences</b>	.34 (.55)
<b>Neutral Narrative - Neutral Sentences</b>	.34 (.77)
<b>Shame Narrative - Residual Sentences</b>	.41 (.95)
<b>Neutral Narrative - Residual Sentences</b>	.24 (.70)

### ***3.3 Test of Hypothesis Two - Dissociation will increase after the shame induction***

Mixed ANOVA examined PDEQ scores (see Table 15) for condition (experimenter, self, and neutral) by emotion (neutral narrative and shame narrative) and produced a significant main effect for emotion,  $F(1, 30) = 11.21, p = .002, \eta_p^2 = .27$ . PDEQ scores were significantly higher after verbalising the shame narrative than the neutral narrative. There was a non-significant trend for condition,  $F(2, 30) = 2.66, p = .09, \eta_p^2 = .15$ . Post hoc tests show higher PDEQ scores in the neutral compared to the self condition ( $p = .03$ ). No significant emotion by condition interaction were found,  $F(2, 30) = .79, p = .46, \eta_p^2 = .05$ . This indicates participants' experienced higher levels of dissociation after verbalising the shame narrative compared to the neutral narrative.

Table 15  
*Descriptive Statistics for Modified PDEQ across Conditions*

<b>Condition</b>	<b>Shame M (SD)</b>	<b>Neutral M (SD)</b>
<b>Experimenter</b>	1.14 (.11)	1.10 (.17)
<b>Self</b>	1.11 (.17)	1.00 (.10)
<b>Neutral</b>	1.24 (.21)	1.15 (.14)

### ***3.4 Test of Hypothesis Three - Intrusions will be higher following experimenter and self condition compared to the neutral condition.***

A one-way ANOVA was conducted to examine if differences existed across conditions in the extent participants recorded their thoughts/feelings/memories about the narratives in the diary. No significant difference between conditions was found,  $F(2, 15) = .10, p = .91$ . Descriptive statistics can be found in Table 16. This indicates participants were able to record their thoughts/feelings/memories to a comparable extent across conditions.

Table 16  
*Descriptive Statistics for the Extent Participants Felt they were able to Record all their Thoughts/Feelings/Memories*

<b>Condition</b>	<b>M (SD)</b>
<b>Experimenter</b>	7 (1.41)
<b>Self</b>	7.2 (3.42)
<b>Neutral</b>	6.57 (2.64)

To determine whether intrusions were more frequent on day one or two across experimenter, self or neutral screen conditions a mixed ANOVA for Day (one, two) by condition was conducted on intrusions and frequency. Descriptive statistics can be found in Table 17. A main effect for intrusion frequency was found,  $F(1, 22) = 9.80, p = .005, \eta_p^2 = .31$ , which indicates that the frequency of intrusions were significantly higher on day one. No main effect was found for condition,  $F(1, 22) = 1.37, p = .28, \eta_p^2 = .11$ , indicating there was no significant difference between condition for frequency of intrusions. No significant intrusion frequency by condition effect was found,  $F(2, 22) = .76, p = .48, \eta_p^2 = .07$ . This suggests while intrusion frequency decreased on day two, there was no influence of condition.

Table 17

*Descriptive Statistics for Intrusion Frequency across Conditions*

<b>Intrusions</b>	<b>Condition</b>	<b>M (SD)</b>
<b>Day 1</b>	<b>Experimenter</b>	1.57 (1.51)
	<b>Self</b>	2.43 (1.81)
	<b>Neutral</b>	1.45 (.93)
<b>Day 2</b>	<b>Experimenter</b>	.71 (.76)
	<b>Self</b>	1.43 (1.13)
	<b>Neutral</b>	1.09 (.54)

To determine whether intrusion distress for day one or two was higher in the experimenter, self or neutral screen condition a mixed ANOVA for Day (one, two) by condition was conducted on intrusion distress. Descriptive statistics can be found in Table 18. No main effect of intrusion distress,  $F(1, 22) = .19, p = .67, \eta_p^2 = .01$ ; or condition,  $F(2, 22) = 2.18, p = .14, \eta_p^2 = .17$  was found. Furthermore, no intrusion distress by condition interaction was found,  $F(2, 22) = 2.36, p = .12, \eta_p^2 = .18$ , suggesting participants' distress remained similar across day one and two.

Table 18

*Descriptive Statistics for Intrusion Distress across Conditions*

<b>Distress</b>	<b>Condition</b>	<b>M (SD)</b>
<b>Day 1</b>	<b>Experimenter</b>	1.43 (1.62)
	<b>Self</b>	1.86 (2.21)
	<b>Neutral</b>	3.33 (2.05)
<b>Day 2</b>	<b>Experimenter</b>	1.21 (1.32)
	<b>Self</b>	2.26 (1.80)
	<b>Neutral</b>	2.94 (1.98)

## **CHAPTER 4**

### **DISCUSSION**

The aim of the current study was to use an experimental design to address the nature of eye gaze diversion during shame induction, and shame's association with dissociation and ongoing intrusive thoughts in a sample of individuals in counselling for psychological problems. Three hypotheses were derived. During shame induction, participants looking at themselves or the experimenter would 1) divert their gaze most, 2) have the highest dissociation and 3) have more intrusive memories of the shame scenario. Overall, it was found that gaze diversion occurred more frequently when participants verbalised shame narratives, than when verbalising neutral narratives. Results indicated however that participants diverted eye gaze similarly when required to look into the eyes of the experimenter, their own eyes (via a mirror), or a neutral screen. Additionally, while it was found that state dissociation increased following shame inductions, dissociation was comparable across all three conditions. Lastly, there was no difference across conditions for intrusion distress or frequency following experimental procedure. Taken together, the results of the current study do not support the hypotheses that eye gaze diversion, dissociation and intrusions would be higher while looking at experimenter or oneself compared to a neutral screen. However, the results do show that in the shame narratives increased eye gaze diversion and dissociation was evident, suggesting that verbalising a shame narrative, regardless of context produces gaze diversion and dissociation.

#### ***4.1 Overall findings***

##### ***4.1.1 Experimental Condition Characteristics and Manipulation Checks***

Analysis revealed no significant differences in age and sex across the three conditions, indicating any effects seen in the current study were due to the experimental manipulation,

rather than these individual demographic factors. Self-reported emotion ratings were significantly higher after the shame induction, as was shame as a specific emotion. Additionally, state shame scores were significantly higher following the shame narrative. However, there was no significant difference across conditions for shame scores following the shame narrative. This suggests the shame manipulation was effective in inducing shame.

Participants reported a moderate level of feeling a part of and absorbed in narratives. This did not differ between narratives or across conditions. Therefore, the manipulation checks indicate the shame inductions were successful and the resulting findings seen in the current study are due to experimental manipulation.

#### *4.1.2 Eye Gaze Diversion and Shame*

The current study demonstrated that more gaze diversion resulted from the shame narrative compared to the neutral narrative. Supporting this, gaze diversion was also higher when participants verbalised shame sentences compared to shame equivalent, neutral and residual sentences. This finding is consistent with McKendry's (2013) study, which employed a similar methodology to that utilised in the current study, whereby occurrences of gaze diversion were similarly greater during the shame narrative and when participants verbalised shame sentences. Taken together these findings are in line with shame literature to date, which suggests eye gaze diversion is a common behavioural symptom of shame (e.g., Keltner, 1995; Tracy & Robins, 2007; Martens, Tracy, & Shariff, 2012). Yet contrary to hypothesis one, eye gaze diversion did not significantly differ across the three conditions for shame narratives or shame sentences. Therefore indicating comparable eye gaze diversion occurrences regardless of whether participants verbalised the shame narrative while looking at themselves in the mirror, at the experimenter, or the neutral screen; suggesting eye gaze diversion did not differentiate internal and external shame. Again, this is consistent with McKendry's (2013) findings that also found no significant differences across conditions.

These findings indicate eye gaze diversion is associated with general shame, rather than shame that may be internally or externally driven. This is expected as literature has suggested there is usually a connection between internal and external shame cognitions (Goss, Gilbert and Allan, 1994; Gilbert et al., 2010). That is, when one has feelings of inadequacy of one's self, they expect others to see them in the same way, and vice-versa. Although participants engaging in gaze diversion while looking at themselves in the mirror would commonly reflect internal shame, it is also possible there was an aspect of external shame present. This is speculated on the participant being aware of the experimenter's presence, as well as knowing they were being video recorded, both of which may have elicited some degree of external shame and potentially confounded the results, leading to the lack of difference found. As there is the possibility that external shame was present in the presumed internal shame condition, the results of this condition could be in part due to external shame and show an accumulation of shame through internal and external sources as opposed to being exclusively internally driven. As it is suggested gaze diversion may be used as a way to reduce negative feelings of exposure and ultimately reduce experiences of shame (Kleinke, 1986), it is conceivable participants (including those looking at their mirror image) diverted their gaze as they verbalised shame sentences (e.g., wiping nasal mucus from your face) to avoid any perceived judgements by the experimenter. But despite the potential explanation offered by the 'external' shame hypothesis for gaze diversion in the internal shame condition, it does not offer a full account, because in the internal shame condition the participants were only looking at themselves, and so diverted gaze away from themselves, not the researcher of some perceived other. Thus, it is possible that both external and internal shame evokes the same or similar degree of gaze diversion as may have been found in the current study.

#### *4.1.3 State Dissociation and Shame*

Results from the current study also indicate that while state dissociation did increase following the shame induction compared to the neutral induction, levels of state dissociation did not differ with regard to whether participants viewed the experimenter, the mirror image of themselves or the neutral screen, contrary to hypothesis two. This suggests as there was no significant difference across conditions, the scenarios themselves were powerful enough to induce dissociative experiences. In short, state dissociation is responsive to shame. This is concurrent with literature to date suggesting dissociation may be employed to modulate or eradicate one's experience of shame (Feiring, Taska, & Lewis, 1996; Lewis, 1992). Matos and Pinto-Gouveia (2010) explored the nature of early shame experiences, their subsequent characteristics as traumatic memories and their association with dissociative symptomology. They reported shame's frequent association with psychological disorders, (e.g., posttraumatic stress disorder, borderline personality disorder and eating disorders) noting that such disorders often include an aspect of dissociation. The current sample of treatment-attending participants may not reflect people in the general population and may present a higher proneness to shame and dissociation. However, results show that while shame experiences are induced, dissociation appears to heighten, and may act as a means to combat or alleviate unwanted negative experiences (e.g. shame) within the current sample.

#### *4.1.4 Intrusions and Shame*

Intrusion frequency was higher on day one when compared to day two, although intrusion distress did not differ between days one and two. Of interest, an analysis of intrusion distress and frequency revealed no significant differences between conditions, contrary to hypothesis three.



#### *4.1.5 Qualitative Observations*

A number of qualitative observations were made during the experimental procedure. These observations revealed that when participants were required to verbalise shame sentences some were unable to say the sentence correctly, and on occasion would mispronounce a word and have to correct it. It is possible that this occurred as a result of participants experiencing shame which prevented them from attending to what was being verbalised. Conversely, the mispronunciation or repetition of words may have decreased the impact of the narrative by reducing coherence and therefore absorption into the narrative. Additionally, some participants had a tendency to convert the sentences they were verbalising to past tense (e.g. I walked into my local bank) or second person (e.g. you walk into your local bank). These behaviours may have been a way in which participants could distance themselves from shame or minimise any negative emotions and therefore may have impacted the results to some degree.

#### *4.2. Practical and Theoretical Implications*

The findings presented in this study have potentially important implications regarding shame and could contribute to the existing body of research. Moreover, the current study indicates that eye gaze diversion is demonstrated equally across both shame-inducing evaluations of the self (i.e. internal shame) and evaluations from others (i.e. external shame); indicating eye gaze diversion is generally associated with shame rather than specifically internal or external shame.

The current study may aid in the treatment of mental health difficulties. Specifically, therapists should continue to be aware of gaze diversion as a behavioural marker for shame activation. Literature to date supports the notion that there are distinct non-verbal markers of shame, to which eye gaze diversion is included (i.e., Darwin, 1872; Izard, 1971; Keltner, 1995; Martens, Tracy, & Shariff, 2012). The current study has indicated support for these

clinical observations. Gaze diversion as a result of shame appears to be pertinent when people are verbalising the most shameful parts of their own experience, as observed in the current study. Participants' gaze diversion and therefore shame was found to be highest when verbalising the sentences of the narrative perceived as shameful in nature. This suggests that if therapists notice gaze diversion during specific parts of a narrative in therapy it may signal associated shame and therefore may need more therapeutic focus and attention to ameliorate.

Another important implication to be taken from the current research regards dissociation and therapy. The ideas presented currently may aid in therapists being more mindful of occurrences of dissociation operating during shame narratives, which may inhibit the therapeutic processing of shameful experiences. The current study found for those currently in therapy, shame appears to be associated with dissociation experiences, as has been found in previous research and literature (Andrews, Valentine, & Valentine 1995; Harder & Lewis 1986; Matos & Pinto-Gouveia, 2010). Given this, a greater knowledge base concerning experiences of dissociation during therapy may aid therapists in recognising states of dissociation. Therefore, knowledge of the association between shame and dissociation may serve to improve therapeutic outcomes.

#### ***4.3 Methodological considerations***

A number of methodological limitations can be identified in the present study. While both the shame and neutral narratives were generated to be similar in length and structure, sentence lengths within narratives varied, resulting in some sentences being much longer than others. While some participants stated having had difficulty retaining or recalling some sentences heard during the narratives, this was also evident in a number of recordings in which some participants repeated the sentences inaccurately, repeated the sentence partially or simply passed and chose not to verbalise the sentence at all. Additionally, non-verbal behaviours such as closing eyes, eyes fluttering, and smiling were observed while participants

were having difficulty repeating a longer sentence. Consequently, it is unclear as to whether the behaviours were reflecting an experience of shame due to induction or as a direct result of having difficulty verbalising the sentence. Therefore, it is advised any future replications of the current study may benefit from reducing longer sentences in order to reduce ambiguity of non-verbal behaviours and improve the effectiveness of the emotion inductions.

Related to this, participants were asked to absorb themselves in the story as much as they could, while simultaneously retaining each sentence in order to verbalise it. Consequently, difficulty in repeating sentences may have detracted from participants' abilities to immerse themselves fully in the story, thereby possibly reducing the effectiveness of the shame induction. It is likely greater immersion in narratives may result in greater differences across conditions. It is also conceivable some participants had difficulty repeating sentences as they were attending to the task of immersing themselves in the narrative (i.e., following the story). Requiring participants to recall sentences, and immerse themselves may have resulted in a high cognitive load for some, which may have compromised the results to some degree. Regardless, future replication of the current study may benefit from shortening sentence length; potentially allowing participants to immerse themselves in the narratives with more ease.

Although distinctions between the definition of shame and embarrassment have been proposed, (e.g., Lewis, 1992; Ortony, Clore, & Collins, 1988) some participants may be unaware of such distinctions and may use the two emotions interchangeably. Conversely, it has been proposed no clear distinction between shame and embarrassment has been established (Crozier, 2014). Therefore it is possible participants in the current study experienced shame as a direct result of the shame induction, however reported feeling embarrassment and vice-versa. The results in this study may have been different if participants were informed and aware of a distinction between shame and embarrassment.

This could be improved in future research by providing participants clear definitions of emotions (e.g., shame, embarrassment and guilt), which they are required to rate in a study. This may provide participants with a clearer understanding of emotions experienced and potentially improve their ability to communicate their experiences more clearly and in line with definitions present within psychometric scales.

All participants were undergoing counselling for various reasons. Although this sample was deemed appropriate for this study, for the purposes of examining a clinical population, the sample was one of convenience. The results of this study therefore may not be generalizable to all populations. Studies looking at self-conscious emotions such as shame and experiences of dissociation would benefit from examining other populations, such as child samples, community samples and inpatient clinical populations. Additionally, while the current study did utilise a clinical sample, it is possible the sample represented a higher functioning (e.g., having the ability to maintain work) and readily accessible clinical population. Therefore, examining a clinical population within an inpatient setting (whereby participants overall may be less functional in the community), may provide further information from a more impaired clinical population.

#### ***4.4 Future Research***

The current shame induction appeared to have a considerable emotional effect, as evidenced by significantly higher eye gaze diversion during the shame narrative. However, it is possible that differentiation between internal and external shame may have been evident with a more powerful shame induction. Matos and Pinto-Gouveia (2010) suggest shame is less of a general construct and more specific to internal and external shame. They found early shame experiences associated with participant's current feelings of both internal and external shame in adulthood. Future researchers should therefore aim to utilise a shame induction that is potentially of a more shameful nature (see Appendix O) than the narrative used in the

current study, to assess whether there is greater differentiation between internal and external shame when more shame is induced. Alternatively, future research could examine several levels of shame induction then compare them to note whether effects are found, which may show that more shame leads to more negative outcomes or emotions experienced.

A number of qualitative observations were made while undertaking the current study, which were not the focus of the experiment. Of particular note, participants appeared to make errors (e.g. mispronounce) when verbalising shame sentences. Additionally, non-verbal behaviours that were not the focus of the current study, such as postural changes and closed eyes also appeared to be affected by the shame induction compared with neutral induction. Slumped posture was more evident during the shame induction as was participants closing their eyes. It is possible that the previously mentioned behaviours occurred as a direct result of emotion induction and could provide further insight to the current literature on the non-verbal behaviours of shame and may indicate additional behavioural strategies to minimise emotional responses, similar to diverting eye gaze or dissociation. As such, further research in this area could examine other possible non-verbal markers of shame such as posture and closed eyes.

#### ***4.5 Conclusions***

The current study aimed to address whether the nature of eye gaze diversion was generally associated with shame or more specifically related to internal and external shame. Additionally, the research examined levels of state dissociation following a shame induction. Lastly, intrusive thoughts and subsequent distress was assessed as a function of shame induction. Several analyses reached significance, indicating eye gaze diversion was highest during shame induction and reflected a general association with shame. State dissociation was found to be significantly higher following the shame narrative compared with the neutral. Unexpectedly, it was found that there were no significant differences across conditions in

regards to intrusion frequency and distress. The results of the current study suggest eye gaze diversion is generally associated with shame. However, it remains unclear as to whether external shame was elicited having the experimenter in the room and being recorded. A number of methodological limitations in the current study may hinder the generalisability of findings, including definitions, participant sample and narrative engagement. Irrespective, the current study demonstrates important implications for the identification of shame and dissociation in therapy, which could lead to better therapeutic outcomes when considered, then targeted and may aid in the identification and validation of further shame behaviours.

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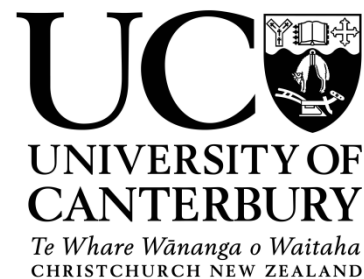


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## APPENDIX A

### INVITATION LETTER



**Title:** Self-conscious emotions, dissociation and cognition: an experimental investigation.

We are conducting a research study looking at people's responses to shame. This study may be of interest to you and more details can be found in this letter.

This letter provides some information about the nature of the research and how to volunteer. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and talk to others about the study if you wish. If you have any questions please ask either your therapist (who may have given you this letter) or contact Martin Dorahy (Clinical Psychologist/Associate Professor, University of Canterbury) or Amber Scott (Masters student, University of Canterbury).

#### **What is the purpose of the study?**

Firstly, we want to investigate whether or not experiences of dissociation occur during an induction of shame. We also want to understand how distressing the emotion of shame is by determining whether experiencing a low-level of shame result in later memories in participants. Data from this study will help understand people's responses to shame. To do this, we are asking people who are currently seeking assistance for their difficulties if they would like to volunteer to help us with a study that looks at these issues.

#### **Do I have to take part?**

No, it is up to you whether you decide to take part. If you do want to be involved, please put your name and preferred contact number on the reply slip below and give it to your therapist or Dr Martin Dorahy. If you decide not to take part this will be respected and understood and your therapy will not be affected.

#### **What will happen to me if I take part?**

If you decide to participate you will complete 4 questionnaires. You will also read 2 scenarios (one of a situation that some people may find embarrassing, and another of a neutral situation). You will read these while either looking at yourself in a mirror, looking at the researcher or looking at a neutral image. This part of the study will be video recorded and we will monitor your heart rate. Lastly, over the following 2 days you will be invited to keep a diary of any memories of the shame assessment you experience. It will take approximately 60 minutes to complete the questionnaires and read the two scenarios, and then we will arrange to meet up briefly again 2 days later to speak with about your experience of being in the study. This will take approximately 10-15 minutes. You will be provided with petrol vouchers to assist your travel to the university, you will also be given a \$10 food voucher as a way to thank you for your involvement. However, if you do not drive you may opt for food vouchers instead.

**Will my taking part in this study be kept confidential?**

Yes. All the information about your participation in this study will be kept confidential.

Contact Details:

You are free to ask any further questions to your therapist, the researcher (Amber Scott), or Dr Martin Dorahy. If you are interested in participating in this research, please complete the reply slip below and give it to your therapist.

Dr Martin Dorahy

Phone: 03-3643416 (Extn:3416)

Email: [martin.dorahy@canterbury.ac.nz](mailto:martin.dorahy@canterbury.ac.nz)

Amber Scott

Phone: 022 3711628

Email: [amber.scott@pg.canterbury.ac.nz](mailto:amber.scott@pg.canterbury.ac.nz)

-----  
*Reply Slip*

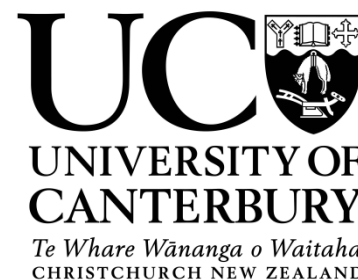
I consent to be contacted by a member of the Research team about the research project:

**Signed (participant):** \_\_\_\_\_ **Date:** \_\_\_\_\_

*Print name (participant):* \_\_\_\_\_ **Telephone:** \_\_\_\_\_

## APPENDIX B

### Department of Psychology Master's Thesis Information Sheet



You are invited to participate in the research project “Self-conscious emotions, dissociation and cognition: an experimental investigation’. This project is being carried out as a requirement for the course *PSYC690: MA Thesis*. It is intended the results of this project will be published as part of a thesis, with the possibility of also being published in a journal. Your participation is completely voluntary, and you may at any time withdraw from the project, including withdrawal of any information you have provided, without any negative consequence to yourself. Please note that data is not able to be withdrawn from the research once it is entered into the computer system as it will become anonymous.

#### **What is the purpose of this study?**

Firstly, we want to investigate whether or not experiences of dissociation occur during an induction of shame, through the monitoring of heart rate, heart rate variation and self-report during shame induction. Furthermore, we want to corroborate findings regarding eye-gaze diversion during stories that some people may find embarrassing. We finally want to understand how distressing the emotion of shame is by determining whether the stories result in later memories for participants. Data from this study will help understand people's responses to shame.

#### **What will happen to me if I take part?**

If you decide to participate you will complete four questionnaires, read two scenarios aloud whilst being video recorded (shame induction) and lastly, over the following 2 days keep a diary of any memories you experience. The schedule and approximate times are listed below:

<u>Measure/Assessment</u>	<u>Approximate Time</u>
Dissociative Experiences Scale	5 minutes
Experience of Shame Scale	5 minutes
Shame Induction (video recorded)	10 minutes
Peritraumatic Dissociative Experiences Questionnaire	5 Minutes
State Shame and Guilt Scale	5 minutes
Intrusion Dairy	Over a 2 day period

#### **What do I have to do?**

You just simply have to respond to the questions in the questionnaires as best you can. Before reading the stories wires will be placed on you so your physiological responses can be measured e.g. heart rate. You will wear a set of headphones through which you will hear the scenarios, we ask that you repeat each part of the scenario in first person (i.e. you may hear “you walk up to...” but you will say “I walk up to”). While repeating the scenarios we ask you look straight ahead of you. Finally, following the shame induction we ask you to keep a diary for two days of whether you have any intrusions (e.g. thoughts, memories, feelings related to the content of the induction). During this time we ask that you record both the time

and a brief description of each intrusion. In addition, for each intrusion we require you to rate the severity of your emotional experience on a scale ranging from 0 (“totally relaxed, no shame feelings”) to 10 (“highest shame you have ever felt”). After which you will return your diary back to the experimenter.

**What are the possible disadvantages of taking part?**

While you will not be asked to describe any events you may find distressing, you will be repeating a potentially embarrassing scenario. Some people may find this distressing. A list of support services is included at the end of this sheet in case you find that helpful. You can also speak to your counsellor about your experience.

**Will my taking part in the study be kept completely confidential?**

You can be assured of the complete confidentiality of the data gathered in this investigation. To ensure confidentiality no names will be used on the assessments or in the final report. You are welcome to request a copy of all assessments you complete and subsequent findings within the study.

This project is being carried out by Amber Scott under the supervision of Dr Martin Dorahy. Either will be pleased to discuss any concerns you may have about participation in the project. Contact details are as follows:

Dr Martin Dorahy  
Phone: 03-3643416 (Extn:3416)  
Email: [martin.dorahy@canterbury.ac.nz](mailto:martin.dorahy@canterbury.ac.nz)

Amber Scott  
Phone: 022 3711628  
Email: [amber.scott@pg.canterbury.ac.nz](mailto:amber.scott@pg.canterbury.ac.nz)

Human Ethics Committee:

Postal: Okeover House, University of Canterbury, Ilam, 8041, Christchurch  
Email: [human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz)

The project has been reviewed and approved by the University of Canterbury Human Ethics Committee. *Human Ethics Committee Principles and Guidelines 12. Ref: 2013/42.*

## APPENDIX C

Department of Psychology  
Master's Thesis



### CONSENT FORM

“Self-conscious emotions, dissociation and cognition: an experimental investigation”

I have read and understood the description of the above named project. I have had the opportunity to ask questions and have had these answered satisfactorily. On this basis, I agree to participate, with the understanding that confidentiality will be preserved.

I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided, without any negative consequence to myself.

I consent to the research being videotaped.

I also consent to my data being merged with all the other data.

I note that the project has been reviewed and approved by the University of Canterbury Human Ethics Committee (Ref: 2013/42).

Full Name (please print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **APPENDIX D**

### **HELPFUL CONTACTS**

#### **SUPPORT SERVICES**

Samaritans: 0800 726 666

Lifeline: 0800 543 354; (03) 366 6743

Warmline: 0800 899 276

#### **COUNSELLING SERVICES**

Petersgate Counselling Service: (03) 343 3391

#### **EMERGENCY SERVICES**

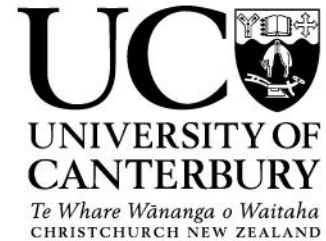
Psychiatric Emergency Services: (03) 364 0482



## APPENDIX E

### HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen  
Email: [human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz)



Ref: HEC 2013/42 \_\_\_\_\_

15 May 2013

Amber Scott  
Department of Psychology  
UNIVERSITY OF  
CANTERBURY

Dear Amber

The Human Ethics Committee advises that your research proposal "Self-conscious emotions, dissociation and cognition: an experimental investigation" has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 14 May 2013.

Best wishes for your project.

Yours sincerely

A handwritten signature in black ink, appearing to read 'L. MacDonald'.

Lindsey MacDonald

*Chair*

*University of Canterbury Human Ethics Committee*

## Dissociative Experiences Scale

These questions describe experiences that you may have in your daily life. Your answer should show how often these experiences happen to you when you **ARE NOT** under the influence of alcohol or drugs. **CIRCLE** a number from 0% to 100% to show what percentage of the time this happens to you. If it happens 45% of the time, circle both 40% and 50%.

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realising that they don't remember what has happened during all or part of the trip.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
2. Some people find that sometimes they are listening to someone talk and they suddenly realise that they did not hear part or all of what was said.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
3. Some people have the experience of finding themselves in a place and having no idea how they got there.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
5. Some people have the experience of finding new things among their belongings that they do not remember buying.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
8. Some people are told that they sometimes do not recognise friends or family members.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)
10. Some people have the experience of being accused of lying when they do not think that they have lied.  
(NEVER)    0%    10    20    30    40    50    60    70    80    90    100    (ALWAYS)

11. Some people have the experience of looking in a mirror and not recognising themselves.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
12. Some people have the experience of feeling that other people, objects and the world around them are not real.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
13. Some people have the experience of feeling that their body does not seem to belong to them.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
19. Some people find that they sometimes are able to ignore pain.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
21. Some people sometimes find that when they are alone they talk out loud to themselves.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing this (for example, not knowing whether they have just mailed a letter or have just thought about mailing it).  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
25. Some people find evidence that they have done things that they do not remember doing.  
(NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing.  
 (NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.  
 (NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)
28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear.  
 (NEVER) 0% 10 20 30 40 50 60 70 80 90 100 (ALWAYS)

## APPENDIX G

# Experience of Shame Scale

Everybody at times can feel embarrassed, self-conscious or ashamed. These questions are about such feelings if they have occurred at any time in the past year. There are no 'right' or 'wrong' answers. Please indicate the response which applies to you with a tick.

		Not at All	A Little	Moderately	Very Much
1.	Have you felt ashamed of any of your personal habits?	( )	( )	( )	( )
2.	Have you worried about what other people think of any of your personal habits?	( )	( )	( )	( )
3.	Have you tried to cover up or conceal any of your personal habits?	( )	( )	( )	( )
4.	Have you felt ashamed of your manner with others?	( )	( )	( )	( )
5.	Have you worried about what other people think of your manner with others?	( )	( )	( )	( )
6.	Have you avoided people because of your manner?	( )	( )	( )	( )
7.	Have you felt ashamed of the sort of person you are?	( )	( )	( )	( )
8.	Have you worried about what other people think of the sort of person you are?	( )	( )	( )	( )
9.	Have you tried to conceal from others the sort of person you are?	( )	( )	( )	( )
10.	Have you felt ashamed of your ability to do things?	( )	( )	( )	( )
11.	Have you worried about what other people think of your ability to do things?	( )	( )	( )	( )
12.	Have you avoided people because of your inability to do things?	( )	( )	( )	( )
13.	Do you feel ashamed when you do something wrong?	( )	( )	( )	( )
14.	Have you worried about what other people think of you when you do something wrong?	( )	( )	( )	( )

- |     |   |     |     |     |     |
|-----|---|-----|-----|-----|-----|
| 15. | Have you tried to cover up or conceal things you felt ashamed of having done?         | ( ) | ( ) | ( ) | ( ) |
| 16. | Have you felt ashamed when you said something stupid?                                 | ( ) | ( ) | ( ) | ( ) |
| 17. | Have you worried about what other people think of you when you said something stupid? | ( ) | ( ) | ( ) | ( ) |
| 18. | Have you avoided contact with anyone who knew you said something stupid?              | ( ) | ( ) | ( ) | ( ) |
| 19. | Have you felt ashamed when you failed at something which was important to you?        | ( ) | ( ) | ( ) | ( ) |
| 20. | Have you worried about what other people think of you when you fail?                  | ( ) | ( ) | ( ) | ( ) |
| 21. | Have you avoided people who have seen you fail?                                       | ( ) | ( ) | ( ) | ( ) |
| 22. | Have you felt ashamed of your body or any part of it?                                 | ( ) | ( ) | ( ) | ( ) |
| 23. | Have you worried about what other people think of your appearance?                    | ( ) | ( ) | ( ) | ( ) |
| 24. | Have you avoided looking at yourself in the mirror?                                   | ( ) | ( ) | ( ) | ( ) |
| 25. | Have you wanted to hide or conceal your body or any part of it?                       | ( ) | ( ) | ( ) | ( ) |

## Peritraumatic Dissociative Experiences

### Questionnaire

Instructions: Please complete the items below by circling the choice that best describes your experiences and reactions *during the audio clip and immediately afterward*. If an item does not apply to your experience, please circle “Not at all true.”

	Very much true	Fairly true	Somewhat true	Not very true	Not at all true
1. I had moments of losing track of what was going on – I “blanked out” or felt separate from what was going on.	1	2	3	4	5
2. My sense of time changed – things seemed to be happening in slow motion.	1	2	3	4	5
3. I felt as though I were a spectator watching what was happening to me, as if I were floating above the scene or observing it as an outsider.	1	2	3	4	5
4. There were moments when my sense of my own body seemed distorted or changed. I felt disconnected from my own body, or that it was unusually large or small.	1	2	3	4	5
5. I felt as though things that were actually happening to others were happening to me – like I was being trapped when I really wasn’t.	1	2	3	4	5
6. I felt confused; that is; there were moments when I had difficulty making sense of what was happening.	1	2	3	4	5
7. I felt disoriented; that is, there were moments when I felt uncertain about where I was or what time it was.	1	2	3	4	5

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. I had moments of losing track of what was going on – I “blanked out” or felt separate from what was going on.   | 1 | 2 | 3 | 4 | 5 |
| 2. My sense of time changed – things seemed to be happening in slow motion.  | 1 | 2 | 3 | 4 | 5 |
| 3. I felt as though I were a spectator watching what was happening to me, as if I were floating above the scene or observing it as an outsider.                | 1 | 2 | 3 | 4 | 5 |
| 4. There were moments when my sense of my own body seemed distorted or changed. I felt disconnected from my own body, or that it was unusually large or small. | 1 | 2 | 3 | 4 | 5 |
| 5. I felt as though things that were actually happening to others were happening to me – like I was being trapped when I really wasn’t.                        | 1 | 2 | 3 | 4 | 5 |
| 6. I felt confused; that is; there were moments when I had difficulty making sense of what was happening.  | 1 | 2 | 3 | 4 | 5 |
| 7. I felt disoriented; that is, there were moments when I felt uncertain about where I was or what time it was.  | 1 | 2 | 3 | 4 | 5 |

8. I have gaps in my memory and cannot remember parts of the experiment.

1      2      3      4      5



## APPENDIX I

# State Shame and Guilt Scale

The following are some statements which may or may not describe how you are feeling right now. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling right at this moment.

Not feeling this way at all                      Feeling this way somewhat                      Feeling this way very strongly

1 ----- 2 ----- 3 ----- 4 ----- 5

- |  |                                   |
|--|-----------------------------------|
| 1. I feel good about myself.                               | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 2. I want to sink into the floor and disappear.            | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 3. I feel remorse, regret.                                 | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 4. I feel worthwhile, valuable.                            | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 5. I feel small.   | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 6. I feel tension about something I have done.             | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 7. I feel capable, useful.                                 | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 8. I feel like I am a bad person.                          | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 9. I cannot stop thinking about something bad I have done. | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 10. I feel proud.  | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 11. I feel humiliated, disgraced.                          | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 12. I feel like apologizing, confessing.                   | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 13. I feel pleased about something I have done.            | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 14. I feel worthless, powerless.                           | 1 ----- 2 ----- 3 ----- 4 ----- 5 |
| 15. I feel bad about something I have done.                | 1 ----- 2 ----- 3 ----- 4 ----- 5 |

## APPENDIX J - Shame and Control Narratives

### Scenario + Control

#### Scenario One – Bank

- You go into your local Bank (Line 1)
- You walk up to a free Teller (Line 2)
- You ask to withdraw \$100 (Line 3)
- As you stand there, you notice the Teller staring at your face (Line 4)
- The Teller begins to smirk (Line 5)
- The Teller points to your face and mentions you have nasal mucus on your cheek (Line 6)
- You quickly get a tissue from your pocket to wipe your face clean (Line 7)
- Before you can do so, another Teller nearby laughs mockingly at you (Line 8)
- You wipe the mucus off (Line 9)
- You feel vulnerable, inferior and exposed (Line 10)
- You wish you could dig yourself into a hole (Line 11)
- You take the \$100 in a rush and head for the door (Line 12)
- On the way out you can sense the Tellers talking about you (Line 13)
- You leave the bank (Line 14)

#### Scenario One – Bank (Control)

- You go into your local Bank (Line 1)
- You walk up to a free Teller (Line 2)
- You ask to withdraw \$100 (Line 3)
- As you stand there, you make conversation with the Teller (Line 4)
- The Teller begins to smile (Line 5)
- The Teller points to your withdrawal slip and asks you to sign it (Line 6)
- You notice you haven't and get a pen from your pocket (Line 7)
- As you do another teller nearby smiles warmly at you (Line 8)
- You sign the withdrawal form (Line 9)
- You feel comfortable and relaxed in the bank (Line 10)
- You wished you had more time to talk to the teller (Line 11)
- You take the \$100 and head for the door (Line 12)
- On the way out you say goodbye to the Tellers (Line 13)
- You leave the bank (Line 14)

Neutral      Shame/Shame Equivalent      Residual Shame/Residual Shame Equivalent

## APPENDIX K

### Intrusion Diary

Over the next 2 days please take the time to fill out the following intrusion diary (starting as soon as you leave today).

*Intrusions are any thoughts/memories/images about the scenario you read, occurring when you had not intended to think about the scenario.*

Each time this happens please note the time that it occurred, rate the level of distress (using the ratings below) and briefly describe its contents in the table on the next page.

- 0: Totally relaxed, no shame feelings.
- 1: Alert and awake, concentrating well.
- 2: Minimal shame.
- 3: Mild shame, no interference with performance.
- 4: Somewhat upset to the point that you cannot easily ignore an unpleasant thought. You can handle it OK but don't feel good.
- 5: Moderate shame, uncomfortable but can continue to perform.
- 6: Feeling bad to the point that you begin to think something ought to be done about the way you feel.
- 7: Quite shamed, interfering with performance.
- 8: Very shamed, can't concentrate.
- 9: Extremely shamed.
- 10: Highest shame that you have ever felt.

Date and Time	How distressing was it? 0-----10	Description of its contents
---------------	-------------------------------------	-----------------------------

**Day 1**

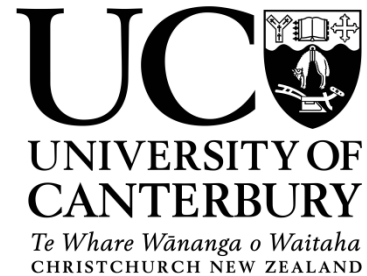
**Day 2**

To what extent did you feel you were able to record all your intrusive memories in the diary?

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10  
*Never remembered to write down the intrusion* *Always remembered to write down the intrusion*

## APPENDIX L

### Department of Psychology Master's Thesis



## DEBRIEF SHEET

The current study aimed to investigate whether or not experiences of detachment from one's self (dissociation) occurred during an assessment of shame, through the monitoring of people's heart rate and how much their heart rate varies in the speed it beats. Furthermore, we wanted to corroborate previous findings regarding your eye movements when you heard the story about being in the bank i.e. was where you looked generally or specifically related to internal (negative judgments from yourself – looking in mirror) or external (negative judgments from others – looking at researcher) shame. This is why we video-taped you reading the scenario, so we could understand when your gaze shifted and when it did not. We finally wanted to examine shame as a distressing experience by establishing whether the shame assessments resulted in later intrusions (thoughts, memories, feelings related to the content of the induction) in participants.

As a participant, you were required to sit in front of a one-way mirror, and repeat out loud scenarios while either, 1) looking at yourself in the mirror, 2) looking at the researcher through the screen or 3) looking at a neutral image on the screen, whilst being recorded. This allowed us to count the number of times you diverted your gaze from the screen within each condition. You were also required to complete four questionnaires that assessed shame and dissociation before and after the shame assessment. Your level of dissociative experiences were also assessed through measuring your bodily responses e.g. heart rate. Finally, you recorded any intrusions you experienced over a 2 day period, as well as the degree of emotion you felt at the time.

We have hypothesized dissociation during shame assessment will be higher in participants who looked at themselves in a mirror (internalised shame) or at the experimenter through the window (externalised shame) than the neutral condition of looking at a neutral image. We also hypothesize individuals will divert their gaze more when looking at themselves or the experimenter than compared to the neutral condition. Lastly, it is predicted participants looking at themselves or the experimenter will have more memories of the shame scenario over a period of two days following the study, than those participants in the neutral condition.

The information provided by you and other participants may not be of direct benefit to you, but may help in understanding more about responses to emotions, which we hope to apply in the therapeutic setting to help people with emotional problems.

*Thank you for your participation in this study, your input is very much appreciated by the research team. If you are interested in obtaining a copy of the research when it is completed, please feel free to contact the primary researcher.*

## APPENDIX M - Experimental Set-Up



## APPENDIX N - Non-Verbal Coding Sheet

Coding	Narrative	Line Number	Word/Phrase
<b>Forehead</b>			
Wrinkles			
<b>Gaze Diversion</b>			
Left			
Right			
Up			
Down			
<b>Eyes</b>			
Eyes Tighten/Narrow			
Eyes Widen			
Eyes Closed			
Double Blink			
Wink			
Eyes Flutter			
<b>Eye Brows</b>			
Brow Lower			
Brow Raise			
Inner Brow Raise			
Outer Brow Raise			
<b>Nose</b>			
Wrinkles Nose			
<b>Mouth</b>			
Corners of Mouth Drop			
Corners of Mouth Raise			
Lip Suck			
Lips Part			
Lips Tighten			
Lip Corner Pulled – Left			
Lip Corner Pulled – Right			
Lip Pucker			
Lip Wipe			
Lip Bite			
Tongue Out			
Swallows			
Sigh			
<b>Cheeks/Jaw</b>			
Cheeks Puff			
Cheek Suck			
Tongue Bulge			
Chin Raiser			
Jaw Clencher			
Jaw Sideways			
Jaw Drop			
<b>Face touches</b>			
<b>Head Movement</b>			
Left			
Right			
Tilt Up			
Tilt Down			
<b>Mispronunciation</b>			
<b>Other</b>			

## **Appendix O - Alternative Shame and Control Narratives**

### **Bedroom - (shame)**

- You are in your bedroom, alone (Line 1)
- You turn on your computer and begin to look through websites (Line 2)
- You notice an advert for a site with images of naked people (Line 3)
- You notice yourself getting sexually aroused (Line 4)
- You become more curious about the site, as your arousal increases (Line 5)
- Soon you want to put your hand down your pants (Line 6)
- You undo your pants and begin to masturbate (Line 7)
- As you reach the height of your arousal, a respected family member rushes into your room (Line 8)
- They see you touching yourself, fully aroused (Line 9)
- You feel your face turning red as you remember what is being portrayed on the computer screen (Line 10)
- You quickly retract your hand from your genitals (Line 11)
- The family member apologises and begins to leave (Line 12)
- You worry over what the family member must think (Line 13)
- You feel dirty and exposed (Line 14)
- You don't know how to face the family member again (Line 15)

### **Bedroom (control)**

- You are in your bedroom, alone (Line 1)
- You turn on your computer and begin to look through websites (Line 2)
- You notice an advert for a site showing cheap flights (Line 3)
- You notice yourself getting excited about its content (Line 4)
- You become more interested in the site as your excitement increases (Line 5)
- Soon you want to begin looking at flight options (Line 6)
- You open the website and begin browsing (Line 7)
- As you're getting more excited about possibilities for a trip, a respected family member rushes into your room (Line 8)
- They see you smiling with enthusiasm (Line 9)
- You feel like telling them about the cheap flights you've found, as they see what's on the screen (Line 10)
- You quickly click on the icon for more flights (Line 11)
- The family member shares your excitement (Line 12)
- You get the impression they are also thinking about taking a trip (Line 13)
- You feel curious about their favourite destinations (Line 14)
- You feel good sharing the idea with your family member (Line 15)